Part 4 of 4

COMMONWEALTH OF VIRGINIA

BEFORE THE

STATE CORPORATION COMMISSION

APPLICATION OF

VIRGINIA ELECTRIC AND POWER COMPANY

FOR APPROVAL AND CERTIFICATION
OF ELECTRIC FACILITIES

Haymarket 230 kV Double Circuit Transmission Line
and 230-34.5 kV Haymarket Substation

Application No. 272

DEQ Supplement

Case No. PUE-2015-00107

Filed: November 6, 2015

Table of Contents

Page

1. Project Description 1
2. Environmental Analysis 4
   - A. Air Quality 4
   - B. Water Source 5
   - C. Discharge of Cooling Waters 7
   - D. Tidal and Non-tidal Wetlands 7
   - E. Solid and Hazardous Waste 8
   - F. Natural Heritage, Threatened and Endangered Species 11
   - G. Erosion and Sediment Control 13
   - H. Archaeological, Historic, Scenic, Cultural or Architectural Resources 14
   - I. Chesapeake Bay Preservation Areas 20
   - J. Wildlife Resources 20
   - K. Recreation, Agricultural, and Forest Resources 20
   - L. Use of Pesticides and Herbicides 22
   - M. Geology and Mineral Resources 23
   - N. Transportation Infrastructure 23

Based on consultations with the Department of Environmental Quality ("DEQ"), Virginia Electric and Power Company ("Dominion Virginia Power" or the "Company") has developed this DEQ Supplement to facilitate review and analysis of the proposed Project by DEQ and other relevant agencies.

1. Project Description

In order to provide service requested by a retail electric service customer (the "Customer") in Prince William County, Virginia; to maintain reliable service for the overall growth in the area; and to comply with mandatory North American Electric Reliability Corporation ("NERC") Reliability Standards; Virginia Electric and Power Company ("Dominion Virginia Power" or the "Company") proposes to (i) convert its existing 115 kV Gainesville-Loudoun Line #124, located in Prince William and Loudoun Counties, to 230 kV operation; (ii) construct in Prince William County, Virginia and the Town of Haymarket, Virginia a new 230 kV double circuit transmission line to run approximately 5.1 miles from a tap point approximately 0.5 mile north of the Company's existing Gainesville Substation on the converted Line #124 ("Haymarket Junction") to a new 230-34.5 kV Haymarket Substation (the "Haymarket Loop"); and (iii) construct a 230-34.5 kV Haymarket Substation on land in Prince William County to be owned by the Company (Line #124 conversion, the Haymarket Loop and Haymarket Substation, collectively, the "Project").

Eight route alternatives (New Road Alternative Route, Northern Alternative Route, Railroad Alternative Route, Carver Road Alternative Route (the Proposed Route), Madison Alternative Route, Wheeler Alternative Route, I-66 Overhead Alternative Route, and I-66 Hybrid Alternative Route) were identified within the study area for the proposed Project. During analysis of these alternatives, three routes (New Road Alternative Route, Northern Alternative Route, and Wheeler Alternative Route) were determined to have more technical nuances to make them electrically viable, and greater construction obstacles, permitting uncertainness, and environmental impacts and were removed from further consideration. The remaining five routes are described below.

Proposed Route (I-66 Overhead):

The Proposed Route is 5.1 miles long between Haymarket Junction and the proposed Haymarket Substation. The Proposed Route originates at the proposed tie-in location on the converted 230 kV Line #124 near the end of Cushing Road (SR 781) and extends for 5.1 miles through Prince William County and the Town of Haymarket, terminating at the proposed Haymarket Substation. It generally crosses commercially/industrially developed and forested land adjacent to existing transportation rights-of-way. The Proposed Route was developed to provide an opportunity to maximize co-location with existing infrastructure (I-66 and Norfolk Southern Railroad) and provides the shortest and most direct route to the proposed Haymarket Substation. From the tie-in location the route travels northwest for about 0.3 mile, crossing I-66, before heading in a westerly direction for another 1.7 miles paralleling the north side of I-66. This segment of the route crosses multiple on/off ramps of the interstate, Lee Highway, and University Boulevard. The route then continues heading northwest 1.9 miles following the northern side of I-66 and crossing Catharpin Road (SR 676). The route then crosses I-66 and heads in a southwest direction for 0.3 mile crossing James Madison Highway (U.S. 15). After crossing James Madison Highway (U.S. 15), the route follows the western side of the highway for about 0.1 mile, crosses John Marshall Highway (SR 55), and then continues northwest on the south side of John Marshall Highway for approximately 0.4 mile before heading south and terminating at the proposed Haymarket Substation.

Following selection of the Proposed Route, two minor route variations were identified for consideration as potential improvements to the Proposed Route. The two variations, the Jordan Lane Variation and the Walmart Variation, are not included in the Environmental Routing Study nor are impacts discussed therein but are discussed below. The Environmental Routing Study, prepared by Environmental Resources Group ("NRG"), is included with this Application,

Jordan Lane Variation – In contrast to the rest of I-66 that the Proposed Route parallels, approximately 675 feet of existing roadway along Jordan Lane within Haymarket Township was not established as VDOT right-of-way. This stretch of Jordan Lane currently remains a county road dedicated to the Town of Haymarket and Prince William County via Piedmont Mews, LLC subdivision. Dominion Virginia Power will work with these localities to negotiate an overhang easement within the dedicated road easement. However, in the event that these negotiations are unsuccessful, the Jordan Lane Variation would eliminate the need for the Company to obtain an easement from the Town of Haymarket or Prince William County. The Jordan Lane Variation would involve the location of one structure inside the proposed sound wall along I-66. The Company does not anticipate that this single structure will unnecessarily burden construction or operation of the transmission line or impede construction or vehicle operations within the existing I-66 right-of-way. This variation does not materially affect the length or impacts of the Proposed Route except to the extent it eliminates a crossing of the Jordan Lane dedicated road parcel.

Walmart Variation – The Company is also presenting the Walmart Variation to limit the amount of tree removal along John Marshall Highway (SR 55) across the frontage of the three parcels immediately east of the proposed Haymarket Substation location. The Walmart Variation would deviate from the Proposed Route just prior to the crossing of James Madison Highway (U.S. 15), proceeding behind several stores in Haymarket Village Center, primarily Kohl's and Walmart. The route would generally follow the property line between the shopping center and VDOT right-of-way, adding an additional 0.1 mile to the Proposed Route's length. The route would generally follow the western edge of the shopping center property south with a short segment extending west before crossing John Marshall Highway (SR 55) and entering the proposed substation site. The Walmart Variation would be approximately 0.1 mile longer than the Proposed Route, cross one additional private parcel, and have 0.4 mile of co-location (compared to 0.5 mile of the Proposed Route). Although tree clearing would be higher along the variation (4.1 acres compared to 2.0 acres), the tree clearing required for the Walmart Variation would be less conspicuous to local traffic. There would be no tangible change to cultural resource impacts due to this variation.

Carver Road Alternative Route:

The Carver Road Alternative Route is a 6.7-mile double circuit transmission line between Haymarket Junction and the proposed Haymarket Substation. The Carver Road Alternative originates at the proposed tie-in location on the converted 230 kV Line #124 near the end of Cushing Road and extends 6.7 miles, terminating at the proposed Haymarket Substation. The Carver Road Alternative Route was developed to provide an opportunity to partially co-locate with existing infrastructure (Norfolk Southern Railroad), and also to avoid crossing through the residential areas located north of Carver Road and avoid crossing between the subdivisions of Greenhill Crossing and Somerset Crossing. From the tie-in location, the route follows the same

path as the Proposed Route for about 2.1 miles until it crosses Lee Highway (U.S. 29) and various I-66 on/off ramps. The Carver Road Alternative Route then deviates from the Proposed Route and heads southwest crossing I-66 and generally paralleling the north side of Lee Highway. After crossing Daves Store Lane, the route follows the northern side of Daves Store Lane for 0.2 mile and then crosses Daves Store Lane a second time.

The route then continues northwest for 0.2 mile crossing Daves Store Lane and John Marshall Highway (SR 55). From here, the route heads southwest for about 0.2 mile before heading northwest along the Norfolk Southern Railroad tracks for about 0.1 mile. The route then crosses the tracks and continues in a southwest direction for about 0.7 mile crossing Yountville Drive and Somerset Crossing Drive. The route then travels southwest for about 0.3 mile, crossing Carver Road and then heading in a general northwest direction for 0.5 for mile before crossing Old Carolina Road. From here, the route generally continues northwest for 0.6 mile passing through forested areas surrounding residences and crossing Haymarket Drive. The route then heads northeast for 0.2 mile before turning west for another 0.2 mile. The route then follows the eastern side of James Madison Highway (U.S. 15) for 0.1 mile, crosses James Madison Highway (U.S. 15), and heads southwest for approximately 0.3 mile before heading northeast for about 0.2 mile and terminates into the proposed Haymarket Substation.

Madison Alternative Route:

The Madison Alternative Route is an 8.2-mile double circuit transmission line between Haymarket Junction and the proposed Haymarket Substation. The Madison Alternative Route originates at the proposed tie-in location on the converted 230 kV Line #124 near the end of Cushing Road and extends for 8.2 miles, terminating at the proposed Haymarket Substation. The Madison Alternative Route was developed to provide an opportunity to partially co-locate with the Norfolk Southern Railroad and also to avoid crossing near some of the residences along the Proposed Route. From the tie-in location, the route follows the same path as the Proposed Route for about 2.1 miles until it crosses Lee Highway (U.S. 29) and various I-66 on/off ramps. The Madison Alternative Route then continues to follow the same path as the Carver Road Alternative Route for an additional 2.6 miles to a point on the south side of Carver Road before crossing Old Carolina Road. At this point, the Carver Road Alternative Route heads northwest to follow Carver Road, while the Madison Alternative Route deviates from the Carver Road Alternative Route and heads southwest for about 1.6 miles. This segment of the route crosses Old Carolina Road and Thoroughfare Road. The route then crosses James Madison Highway (U.S. 15) and continues northeast for 0.7 mile following the west side of the highway and crossing Thoroughfare Road, Hokie Place, and Market Ridge Boulevard. Continuing northeast, the route then crosses James Madison Highway (U.S. 15) and follows the eastern side of the highway for about 0.5 mile before meeting back with the Carver Road Alternative Route just south of North Fork Broad Run. The route then follows the same path as the Carver Road Alternative Route for the remaining 0.6 mile and terminates at the proposed Haymarket Substation.

I-66 Hybrid Alternative Route:

The I-66 Hybrid Alternative Route is a new 230 kV double circuit transmission line 5.3 miles in length between Haymarket Junction and the proposed Haymarket Substation. The I-66 Hybrid

Alternative Route originates at the proposed tie-in location on the converted 230 kV Line #124 near the end of Cushing Road and extends for about 5.3 miles through Prince William County and the Town of Haymarket, terminating at the proposed Haymarket Substation. In addition to providing an opportunity to maximize co-location, the I-66 Hybrid Alternative Route was developed to avoid the potential for visual resource impact (viewpoint along I-66) during and after construction. The hybrid route would utilize both overhead and underground transmission facilities. From the tie-in location, the route follows the same path as the Proposed Route for about 2.1 miles until it crosses Lee Highway (U.S. 29) and various I-66 on/off ramps. The route then crosses I-66 where it reaches the transition station, where an overhead to underground transition would occur. The transition station is proposed to be located on the west side of the intersection of I-66 and Lee Highway (U.S. 29). At this point the I-66 Hybrid Alternative Route (underground segment) heads northwest and continues along the southern side of I-66 for 0.7 mile crossing Catharpin Road (SR 676). After crossing Catharpin Road (SR 676), the route continues northwest, crossing I-66, for approximately 1.2 miles following the northern side of I-66. The route then crosses I-66 and then follows the southern side of I-66 and associated eastbound on-ramp for about 0.4 mile. After crossing James Madison Highway (U.S. 15), the route meets up with the Proposed Route on the west side of the James Madison Highway (U.S. 15) and follows this route alignment for the remaining 0.6 mile before terminating at the proposed Haymarket Substation.

Railroad Alternative Route:

The Railroad Alternative Route is a new 230 kV double circuit transmission line 5.7 miles in length between Haymarket Junction and the proposed Haymarket Substation. The Railroad Alternative Route originates at the proposed tie-in location on the converted 230 kV Line #124 near the end of Cushing Road and extends for 5.7 miles through Prince William County and the Town of Haymarket, terminating at the proposed Haymarket Substation. The Railroad Alternative Route was developed to identify a potential route to avoid the I-66 right-of-way and to provide an opportunity to maximize co-location with existing infrastructure (Norfolk Southern Railroad). From the tie-in location, the route follows the same path as the Proposed Route for about 2.1 miles until it crosses Lee Highway (U.S. 29) and various I-66 on/off ramps. The Madison Alternative Route then continues to follow the same path as the Carver Road Alternative Route for an additional 1.4 miles to a point west of the John Marshall Highway (SR 55) and Norfolk Southern Railroad crossings. The route then follows the southern side of the railroad and the northern side of North Fork Broad Run for 1.0 mile. This segment of the route passes through the Town of Haymarket. After crossing Jefferson Street (SR 625), the route crosses North Fork Broad Run and continues on the south side of the river for 0.3 mile before the route meets up with the Carver Road Alternative Route and follows it for the remaining 0.8 mile into the proposed Haymarket Substation.

2. Environmental Analysis

A. Air Quality

Construction of the Project will require that trees be cleared on the right-of way. On the 230 kV Proposed Route and Alternative Routes, merchantable logs from those trees would be removed or stacked along the edge of the right-of-way and the remaining limbs and branches typically

chipped and spread on the upland portions of the right-of-way. The Company does not expect to burn cleared material, but, if necessary, the Company will coordinate with the responsible locality to obtain these permits and will comply with any conditions set forth by the locality. Equipment and vehicles that are powered by gasoline or diesel motors will be used during the construction of the line so there will be exhaust from those motors. During construction, if the weather is dry for an extended period of time, there will be airborne particles from the use of vehicles and equipment within the right-of-way. However, minimal earth disturbance will take place and vehicle speed, which is often a factor in airborne particulate, will be kept to a minimum. Erosion and sedimentation control are addressed in Section 2.G of this Supplement. See also a letter from DEQ dated August 13, 2014, provided as Attachment 2.A.1.

B. Water Source

(No water source is required for transmission lines so this discussion will focus on water bodies that will be crossed by the proposed transmission lines.)

NRG identified and mapped waterbodies in the Project area using publicly-available geographic information system ("GIS") databases, U.S. Geological Survey ("USGS") topographic maps, and recent (2011) digital aerial photography. The waterbodies in the Project area are shown on a general location map included as Figure 12 in Appendix C of the Environmental Routing Study.

The average 650-foot span between transmission line structures proposed by Dominion Virginia Power would likely be adequate to span the waterbodies identified along the Proposed Route and Alternative Routes. However, tree clearing would likely be required within the forested riparian areas at these crossing locations. Avoidance of waterbodies would be incorporated where possible. The Proposed Route and Alternative Routes would likely have an effect on surface waters along these routes due to the removal of forested riparian areas adjacent to streams.

Short-term, minor water quality impacts could occur during the construction of this proposed option. Such impacts would be associated with the soils from disturbed areas being transported by stormwater into adjacent waters during rain events. Increased turbidity and localized sedimentation of the stream bottom may occur as a result of the runoff. However, these impacts would be significantly reduced by the implementation of Dominion Virginia Power's erosion control measures, including the installation of erosion control structures and materials.

Waterways crossed by the Project would be maintained for proper drainage through the use of culverts or other crossing devices, according to Dominion Virginia Power's standard policies. Where clearing of trees and/or woody shrubs is required, clearing within 100 feet of a stream would be conducted by hand. Vegetation would be at or slightly above ground level, and there would be no grubbing of stumps. Dominion Virginia Power would use sediment barriers along waterways and steep slopes during construction to protect waterways from soil erosion and sedimentation. If a section of line cannot be accessed from existing roads, Dominion Virginia Power may need to install a culvert, or temporary bridge to cross small streams. In such case, there may be some temporary fill material required that would be placed on erosion control fabric and removed when work is completed, returning the surface to original contours.

According to the U.S. Army Corps of Engineers ("USACE") documentation, no waters considered navigable under Section 10 of the Rivers and Harbors Act are crossed by the Project.

Proposed Route

The Proposed Route has five waterbody crossings, all of which are intermittent streams. Crossings include Young's Branch, a tributary to Rocky Branch, and multiple tributaries to Little Bull Run. Crossing widths are expected to be minimal (approximately 5 feet) and are not visible on aerial photography.

Carver Road Alternative Route

The Carver Road Alternative Route has eight waterbody crossings, two of which are perennial and four of which are intermittent streams, and two open water crossings. Crossings include Young's Branch, a tributary to Rocky Branch, two crossings of North Fork Broad Run, and two crossings of tributaries to North Fork Broad Run. The largest waterbody crossing along the route is an unnamed pond located just east of Carver Road with a crossing width of about 110 feet.

Madison Alternative Route

The Madison Alternative Route has nine waterbody crossings, two of which are perennial, five of which are intermittent streams, and two open water crossing. Crossings include Young's Branch, a tributary to Rocky Branch, two crossings of North Fork Broad Run, and two crossings of tributaries to North Fork Broad Run. The largest waterbody crossing along the route is the same crossing of the unnamed pond described above for the Proposed Route where the width of the waterbody is approximately 110 feet.

I-66 Hybrid Alternative Route

The I-66 Hybrid Alternative Route has five waterbody crossings, all of which are intermittent streams. Crossings include Young's Branch, a tributary to Rocky Branch, and multiple tributaries to Little Bull Run. Crossing widths are expected to be minimal (approximately 5 feet) and are not visible on aerial photography.

Railroad Alternative Route

The Railroad Alternative Route has 10 waterbody crossings, five of which are perennial crossings and five are intermittent streams. Crossings include Young's Branch, a tributary to Rocky Branch, multiple crossings of North Fork Broad Run and its tributaries. The crossings of North Fork Broad Run range in width from approximately 30 feet to 60 feet.

Haymarket Substation

Based on NRG's desktop wetland and waterbody analysis, no waterbodies were identified on or immediately adjacent to the lands that will be utilized for construction and operation of the proposed Haymarket Substation.

C. Discharge of Cooling Waters

No discharge of cooling waters is associated with the Project.

D. Tidal and Non-tidal Wetlands

NRG has identified wetlands within the Project area using remote sensing data sources to conduct an offsite desktop wetlands delineation. A copy of NRG's Wetlands Study is included in Appendix A of the Environmental Routing Study. These sources included ESRI/Microsoft Aerial Imagery dated April 2011; Google Earth Imagery and Historical Imagery, dates ranging from 1989 to 2013; Virginia Information Technologies Agency – Virginia Base Mapping Program Digital Ortho-Rectified Infrared Images, dated 2011; USGS 7.5-minute topographic maps; 5-foot contours derived from USGS National Elevation Dataset 10-meter Digital Elevation Model ("DEM"); 5-foot contour DEM derived from Dewberry collected 0.5-meter LiDAR for USGS and Virginia FEMA (obtained via William & Mary); U.S. Fish and Wildlife Service ("FWS") National Wetland Inventory (NWI) mapping; U.S. Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS) Soil Survey Geographic (SSURGO) database for Prince William and Fauquier Counties, Virginia; and USGS National Hydrography Dataset. NRG did not field delineate wetlands within the Project area.

While most wetlands will be spanned, forested wetlands will be cleared but allowed to return to scrub-shrub wetlands after construction is completed. All wetlands will require protective matting to be installed to support construction vehicles and equipment and materials during construction.

Tidally-influenced wetlands do not occur in the Project area. The nearest tidal wetlands are approximately 20 miles from the Project area.

Proposed Route

Based on NRG's Desktop Wetland Analysis data, the Proposed Route will cross about 0.5 mile of wetland habitat and will require the clearing and/or disturbance of up to approximately 5.9 acres of wetland area. Of the 5.9 acres of wetland habitat that could be disturbed along this route, about 3.9 acres consist of forested wetlands (66%), 1.4 acre consists of emergent wetlands (24 %), and 0.6 acre consists of unconsolidated wetland (10%).

Carver Alternative Route

Based on NRG's Desktop Wetland Analysis data, the Carver Road Alternative Route will cross about 0.9 mile of wetland habitat and will require the clearing and/or disturbance of up to approximately 11.5 acres of wetland area. Of the 11.5 acres of wetland habitat that could be disturbed along this route, about 8.3 acres consist of forested wetlands (72%), 2.4 acre consists of emergent wetlands (21%), and 0.8 acre consist of unconsolidated wetlands (7%).

Madison Alternative Route

Based on NRG's Desktop Wetland Analysis data, the Madison Alternative Route will cross about 0.9 mile of wetland habitat and will require the clearing and/or disturbance of up to

approximately 11.3 acres of wetland area. Of the 11.3 acres of wetland habitat that could be disturbed along this route, about 7.8 acres consist of forested wetlands (69%), 2.7 acre consists of emergent wetlands (24%), and 0.8 acre consists of unconsolidated wetlands (7%).

I-66 Hybrid Alternative Route

Based on NRG's Desktop Wetland Analysis data, the I-66 Hybrid Alternative Route will cross about 0.5 mile of wetland habitat and will require the clearing and/or disturbance of up to approximately 5.1 acres of wetland area. Of the 5.1 acres of wetland habitat that could be disturbed along this route, about 3.6 acres consist of forest wetlands (71%), 1.1 acre consists of emergent wetlands (21%), and 0.4 acre consists of unconsolidated wetland (8%)

Railroad Alternative Route

Based on NRG's Desktop Wetland Analysis data, the Railroad Alternative Route will cross about 1.5 miles of wetland habitat and will require the clearing and/or disturbance of up to approximately 20.8 acres of wetland area. Of the 20.8 acres of wetland habitat that could be disturbed along this route, about 18.9 acres consist of forested wetlands (91%), 1.4 acres consist of emergent wetlands (7%), and 0.5 acre consists of unconsolidated wetland (2%).

Haymarket Substation

Based on NRG's desktop wetland and waterbody analysis, no wetlands were identified on or immediately adjacent to the lands that will be utilized for construction and operation of the proposed Haymarket Substation.

E. Solid and Hazardous Waste

Environmentally regulated sites in the study area have been identified using publicly-available GIS databases obtained from the U.S. Environmental Protection Agency ("EPA") and the Virginia DEQ. These databases provide information about facilities, sites, or places subject to environmental regulation or of environmental interest. These include sites that use and/or store hazardous materials, waste producing facilities operating under permits from the EPA or other regulatory authorities, sites undergoing cleanup, Superfund sites, the storage of petroleum, petroleum release sites, and solid waste sites. The identification of a site in the databases does not mean that the site necessarily has contaminated soil or groundwater.

A summary of the information from the EPA and DEQ databases within a 1.0 mile buffer of the Proposed Route and Alternative Route centerlines is provided in Table 1 below and depicted in Figure 1.

TABLE 1
Haymarket Substation and 230 kV Transmission Line Project

Environmental Regulated Facilities and Hazardous Waste/Petroleum Release Sites within 1 Mile

Database	Proposed Route	Carver Road Alternative	Madison Alternative	Railroad Alternative	I-66 Hybrid Alternative
Waste	36	39	39	39	38
Toxics	3	3	3	3	3
Land	1	1	1	1	1
Air	21	22	22	22	21
Water	3	3	3	3	3
Solid Waste Facilities	0	0	0	0	0
Petroleum Facilities	46	54	54	52	48
Petroleum Releases	76	75	77	73	76
Total	**186**	**197**	**199**	**193**	**190**

Notes

Waste (Facilities that handle or generate hazardous wastes)
Toxics (Facilities that release toxic substances to the environment)
Land (Site cleanup under RCRA Corrective Action, Superfund or Brownfield programs)
Air (Facilities with a release of pollutants to the air)
Water (Facilities that discharge storm or process water to surface water)
Solid Waste Facilities (Former and existing landfills)
Petroleum Facilities (Regulated petroleum storage)
Petroleum Releases (Typically associated with storage tank releases)

To further evaluate the potential impact to the Proposed and Alternate Routes, NRG assessed the sites within 1,000 feet of the route centerlines (Table 2).

TABLE 2
Haymarket Substation and 230 kV Transmission Line Project

Environmental Regulated Facilities and Hazardous Waste/Petroleum Release Sites within 1,000 Feet

Database	Proposed Route	Carver Road Alternative	Madison Alternative	Railroad Alternative	I-66 Hybrid Alternative
Waste	5	11	11	10	7
Toxics	1	1	1	1	1
Land	1	1	1	1	1
Air	4	6	6	6	4
Water	2	2	2	2	2
Solid Waste Facilities	0	0	0	0	0
Petroleum Facilities	3	10	10	11	5
Petroleum Releases	11	22	22	22	18
Total	**27**	**53**	**53**	**53**	**38**

Notes

Waste (Facilities that handle or generate hazardous wastes)
Toxics (Facilities that release toxic substances to the environment)
Land (Site cleanup under RCRA Corrective Action, Superfund or Brownfield programs)
Air (Facilities with a release of pollutants to the air)
Water (Facilities that discharge storm or process water to surface water)
Solid Waste Facilities (Former and existing landfills)
Petroleum Facilities (Regulated petroleum storage)
Petroleum Releases (Typically associated with storage tank releases)

Based on a review of sites listed in the EPA and Virginia DEQ databases within 1,000 feet of the various route centerlines, and estimating the depth to groundwater and flow direction, NRG further evaluated five petroleum facilities and one Resource Conservation and Recovery Act ("RCRA") Corrective Action site that are located immediately adjacent to, or are crossed by the Proposed Route and/or Alternative Route centerlines. The DEQ deems a petroleum release closed once no further risk to the general public has been identified, although petroleum residue might remain. The risk assessment does not always consider the risk to subsurface utility work nor address additional costs associated with managing contaminated soil or groundwater. All of the petroleum releases crossed by, or adjacent to, the proposed Project routes are listed as closed.

The five sites are documented petroleum facilities, listed below.

- A former Q-Stop 616 gas station site is located approximately 300 feet south of the Proposed Route and 250 feet south of the I-66 Hybrid Alternative centerlines, at the intersection of Washington Street and James Madison Highway (U.S. 15). There are four petroleum releases associated with this site. The former gas station is located on a topographic high based upon review of a USGS 2013 topographic map, and groundwater flow direction is estimated to be to the northeast, toward the Proposed Route and I-66 Hybrid Alternative Route centerlines. Depth to groundwater is approximately 20 feet

below ground surface. Approximately 500 feet down-gradient, the Q-Stop 616 petroleum release flow path potentially crosses the east-trending segments of the Proposed Route and I-66 Hybrid Alternative Route centerlines. Due to the estimated depth to groundwater, no further evaluation is recommended for this site.

- A former L-23 Pumping Station is located approximately 140 feet northeast of the Railroad Alternative Route near Old Carolina Road. There are no documented petroleum releases associated with the site. Depth to groundwater at this site is estimated to be less than 10 feet due to the proximity of the North Fork Broad Run River. Based upon review of a USGS 2013 topographic map, the groundwater flow direction is estimated to be southwest toward the river and the Railroad Alternative Route. However, due to the absence of documented petroleum releases at the site, no further evaluation is recommended for the site.

- A second former Shell gas station is located approximately 50 feet south of the Carver Road Alternative Route, Railroad Alternative Route, and Madison Alternative Route centerlines, at the intersection of Daves Store Lane and Lee Highway (U.S. 29). There are two petroleum releases associated with this closed facility. Based upon review of a USGS 2013 topographic map, the estimated groundwater flow direction is to the northwest, in the direction of the three centerlines. Depth to groundwater is estimated to be approximately 20 feet below ground surface based upon the evaluation of nearby surface water features. Based upon the contamination potential and the groundwater flow direction, further evaluation is recommended for this site.

The Atlantic Research Corporation in Gainesville is a RCRA Corrective Action site, and the northern boundary of the site is located approximately 600 feet south of the Proposed Route and Alternative Route centerlines. Generally, groundwater and surface water at the site flows from the north to the south and southeast. Depth to groundwater at the northern and southern portions of the site ranges from approximately 10 to 20 feet below ground surface. The Proposed and Alternative Routes are separated from the site by I-66, and the centerlines are up-gradient of the ARC property limits; thus, no further evaluation is recommended.

No federal Superfund or Brownfield sites identified in the reviewed databases were located within one mile of the Proposed Route or Alternative Route centerlines.

F. Natural Heritage, Threatened and Endangered Species

In order to identify areas of ecological significance within the Project area, NRG obtained a copy of the Virginia Department of Conservation and Recreation ("VDCR") Natural Heritage Resources ("NHR") screening dataset. Species occurrence data was also obtained from the VDCR's NHR Program and from the Virginia Department of Game and Inland Fisheries ("VDGIF") to identify locations within the study area that potentially support protected species. NRG also conducted county queries of the VDCR NHR website, the VDGIF Virginia Fish and Wildlife Information Service website, and reviewed the FWS, Virginia Field Office county lists. Species occurrences reported by the FWS and VDCR NHR datasets were evaluated against the VDGIF's digital EnviroReview Listed SppObs data, and the VDCR's Element Occurrence Representations ("EOReps") datasets. To obtain the most current eagle nest data, NRG reviewed

the Center for Conservation Biology ("CCB") "VAEagles" website, which provides information about the Virginia bald eagle population including the results of the CCB's annual eagle nest survey. If deemed necessary, surveys will be conducted at the appropriate time to determine if these species are present, and Dominion Virginia Power will coordinate with VDGIF and VDCR as appropriate to minimize any impact on these resources. The agency/county lists of threatened and endangered species were reviewed and are described in Section 3.2.5 of the Environmental Routing Study.

The FWS county lists, VDCR's NHR Program, and VDGIF identify four state- and federally-listed species that have been documented within the proposed Project counties. These species include the northern long-eared bat, dwarf wedgemussel, harperella, and brook floater. The dwarf wedgemussel has been documented within Fauquier County, the harperella and brook floater have been documented in Prince William County, and the northern long-eared bat has been documented within Fauquier and Prince William Counties.

Based on the CCB's 2013 survey, none of the proposed or alternative segments intersect with any primary or secondary management zones as identified in The Bald Eagle Protection Guidelines for Virginia (FWS and VDGIF, 2000). According to the CCB, the nearest documented eagle nest is located approximately 1.8 miles northeast of the Wheeler Alternative Route. If an eagle nest is identified within 1,350 feet of the Project right-of-way prior to construction, Dominion Virginia Power will work with the appropriate jurisdictional agencies to minimize impacts on this species.

The equipment and excavation required for the construction of new foundations and support structures will have a temporary impact on the ground surface, but will not result in permanent changes to the terrain. There will be no change in contours or redirection of the flow of water, and the amount of spoilage from foundations and structure placement will be minimal. Excess soil in wetlands generated through foundation construction will be removed.

Herbaceous vegetation in the associated wetlands and riparian areas will not be removed, but could be temporarily impacted by construction equipment and vehicular movement. Should the removal of woody shrub vegetation occur within wetlands or riparian areas, Dominion Virginia Power will use the least intrusive method reasonably possible to clear the corridor. Hand-cutting of vegetation will be conducted, where needed, to avoid and minimize impacts on streams and/or wetlands. Following construction, the existing and temporary rights-of-way will revert to pre-construction conditions.

Proposed Route

The VDCR NHR Program determined that based on the scope of activity and distance to resources, the Proposed Route would not adversely impact natural heritage resources. The FWS determined that the Project area may support potential habitat for northern long-eared bat, dwarf wedgemussel, and harperella. The FWS also determined that species surveys will be required prior to construction to determine if the potential presence for listed species or suitable listed species habitat exists. If identified, Dominion Virginia Power will work with the appropriate regulatory agencies to minimize any impacts on listed species and/or listed habitat(s).

Carver Road Alternative Route

The VDCR NHR Program determined that based on the scope of activity and distance to resources, the Carver Road Alternative Route would not adversely impact natural heritage resources. The FWS determined that the Project area may support potential habitat for northern long-eared bat, dwarf wedgemussel, and harperella. The FWS also determined that species surveys will be required prior to construction to determine if the potential presence for listed species or suitable listed species habitat exists. If identified, Dominion Virginia Power will work with the appropriate regulatory agencies to minimize any impacts on listed species and/or listed habitat(s).

Madison Alternative Route

The VDCR NHR Program determined that based on the scope of activity and distance to resources, the Madison Alternative Route would not adversely impact natural heritage resources. The FWS determined that the Project area may support potential habitat for northern long-eared bat, dwarf wedgemussel, and harperella. The FWS also determined that species surveys will be required prior to construction to determine if the potential presence for listed species or suitable listed species habitat exists. If identified, Dominion Virginia Power will work with the appropriate regulatory agencies to minimize any impacts on listed species and/or listed habitat(s).

I-66 Hybrid Alternative Route

The VDCR NHR Program determined that based on the scope of activity and distance to resources, the I-66 Hybrid Alternative Route would not adversely impact natural heritage resources. The FWS determined that the Project area may support potential habitat for northern long-eared bat, dwarf wedgemussel, and harperella. The FWS also determined that species surveys will be required prior to construction to determine if the potential presence for listed species or suitable listed species habitat exists. If identified, Dominion Virginia Power will work with the appropriate regulatory agencies to minimize any impacts on listed species and/or listed habitat(s).

Railroad Alternative Route

The VDCR NHR Program determined that based on the scope of activity and distance to resources, the Railroad Alternative Route would not adversely impact natural heritage resources. The FWS determined that the Project area may support potential habitat for northern long-eared bat, dwarf wedgemussel, and harperella. The FWS also determined that species surveys will be required prior to construction to determine if the potential presence for listed species or suitable listed species habitat exists. If identified, Dominion Virginia Power will work with the appropriate regulatory agencies to minimize any impacts on listed species and/or listed habitat(s).

Correspondence from the Virginia Department of Conservation and Recreation dated July 23, 2014 is provided as Attachment 2.F.1. Correspondence between Dominion Virginia Power and FWS is provided as Attachment 2.F.2.

G. Erosion and Sediment Control

Dominion Virginia Power is required to submit annual erosion and sediment control specifications and an anticipated list of transmission line projects to DEQ for review and approval. Dominion Virginia Power's submittal for 2016 will follow DEQ guidelines, and the Project will be included in the submittal. These specifications are given to the Dominion Virginia Power's contractors and require erosion and sediment control measures to be in place before construction of the line begins and specify the requirements for rehabilitation of the right-of-way.

H. Archaeological, Historic, Scenic, Cultural or Architectural Resources

Dominion Virginia Power introduced the Project to the Virginia Department of Historic Resources ("VDHR") in a consultation letter dated July 11, 2014. The VDHR sent a response letter to Dominion Virginia Power dated August 7, 2014 assigning a VDHR File Number and recommending a Pre-Application Analysis be prepared in accordance with Section I of the VDHR's *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (2008) *(Guidelines).* Correspondence with the VDHR dated July 11, 2014 and August 7, 2014 is provided as Attachment 2.H.1. Dominion Virginia Power retained Dutton + Associates, LLC ("D+A"), to conduct a cultural resources Pre-Application Analysis for the Project. This report is included in Appendix C to NRG's Environmental Routing Study. The following is a summary of that report.

To satisfy the VDHR's 2008 *Guidelines*, the cultural resource review considered National Historic Landmark ("NHL") properties located within a 1.5-mile radius of the centerline; National Register of Historic Places ("NRHP")-listed properties, NHLs, battlefields, and historic landscapes within a 1.0-mile radius of the centerline; NRHP-eligible and -listed properties, NHLs, battlefields, and historic landscapes within a 0.5-mile radius of the centerline; and these same resources as well as archaeological sites located within the right-of-way for each Project alternative requiring new construction. In addition to those resources, Dominion Virginia Power is considering potential effects to VDHR easements, historic and prehistoric high sensitivity areas defined by Prince William County, and other resources identified by stakeholders.

D+A examined site files maintained by the VDHR and National Park Service ("NPS") to identify previously recorded archaeological, historical, and architectural sites within the 1.5-mile tiered study area, including sites listed in or eligible for listing in the NRHP. The *Update to the Civil War Sites Advisory Commission's Report on the Nation's Civil War Battlefields* (NPS, 2009) was reviewed along with other pertinent historical information.

D+A conducted field assessments of known NRHP-eligible or -listed architectural resources for each route alternative in accordance with the VDHR *Guidelines*. Digital photographs of each architectural resource and surrounding setting were recorded, where visible from a public right-of-way, to accurately represent the viewshed of the site. Additionally, D+A documented five balloon flights at publically accessible locations to assess possible viewshed impacts for the route alternatives.

Limited areas of the Project area have been subjected to survey for battlefield assessment by the American Battlefield Protection Program ("ABPP") of the NPS, historic and architectural resources, or archaeological resources. Under the authority of the ABPP Act of 1996, the U.S. Department of the Interior is directed to provide updates to the Civil War Sites Advisory Commission ("CWSAC") on the status of nationally significant Civil War battlefields. In Virginia, the ABPP conducted a field assessment of several battlefields to identify the historic extent of the battle (study area), the areas of fighting on the battlefield (core area located within the study area), and potential National Register boundaries. The results of this study were presented to the CWSAC in 2009. The study areas of four battlefields, Thoroughfare Gap Battlefield, Buckland Mills Battlefield, Manassas Station Operations (Bristoe Station Battlefield/Kettle Run Battlefield), and the Second Battle of Manassas (Manassas II/Brawner's Farm), are crossed by the right-of-way for one or more of the routes.

To ensure consideration of impacts on historic resources, the Pre-Application Analysis recommended in Section I of the VDHR's *Guidelines* was completed to assess visual impacts on known NRHP-eligible or listed historic and architectural resources within the tiered study area. As a result of the unusually complex routing effort, several routing options were considered in an attempt to reach the best balance between community interests, including historic preservation, and the need to provide sufficient reliable power. The Pre-Application Analysis included a visual assessment, consisting of ground photography from public access points and aerial photography review, which provides an overview of possible impacts for each route. This Pre-Application Analysis is included in Appendix C of the Environmental Routing Study. Data gathered on the possible effects of the route alternatives on known cultural resources will be considered to assist in the development of ways to avoid, minimize, or mitigate effects on cultural resources in consultation with the VDHR.

The field reconnaissance included the visual inspection and photo documentation of the following properties based on VDHR *Guidelines*:

- all NHLs located within 1.5 miles of the proposed right-of-way;
- all National Register-listed or locally designated properties (including battlefields, historic landscapes, etc.) located within 1.0 mile of the proposed right-of-way;
- all National Register-eligible properties located within 0.5 mile of the proposed right-of-way; and
- all archaeological sites and historic properties located within the proposed right-of-way.

The viewshed analysis of potential visual effects concerning resources under consideration was based on a finished build height of between 75 and 120 feet for the proposed single pole structures associated with the Proposed Route, the overhead portion of the I-66 Hybrid Alternative Route, the Carver Road Alternative Route, the Madison Alternative Route, and the portion of the Railroad Alternative Route from the tie-in to the west side of Lee Highway; and an average finished build height of 90 feet for the proposed H-frame structures associated with the

portion of the Railroad Alternative Route from the west side of Lee Highway to the proposed Haymarket Substation per the established VDHR criteria outlined in the *Guidelines*.

The Consolidated Natural Resources Act of 2008 (Public Law 110-229) established the Journey Through Hallowed Ground National Heritage Area ("NHA"). The National Park Service (2015) defines NHAs as congressionally-designated places where natural and cultural resources form a cohesive landscape of national importance. The Journey Through Hallowed Ground NHA is about 180 miles long and follows the route of the Old Carolina Road from Gettysburg, Pennsylvania to Charlottesville, Virginia, and also crosses portions of West Virginia and Maryland (Journey Through Hallowed Ground Partnership, 2014). This NHA contains sites that illustrate Revolutionary War, Civil War, and presidential history. In Virginia, the Journey Through Hallowed Ground NHA crosses about 75 miles and nine counties, including Prince William, Fauquier, and Loudoun Counties. Several scenic, natural, recreational, and historic places are featured within the NHA near U.S. 15 and SR 20. The Project review area includes military landscapes, cultural resources, and historic properties that fall within the NHA; these resources are listed in table 3.4 and discussed by route below.

TABLE 3.4
Haymarket Substation and 230 kV Transmission Line Project

Historic and Architectural Resources within the Journey Through Hallowed Ground National Heritage Area

Site Number	Site Name	NRHP/PWC Status
030-5152	Buckland Mills Battlefield	Eligible
030-5610 (030-1016)	Thoroughfare Gap Battlefield	Unevaluated[c]
076-0271	Manassas National Battlefield Park Historic District	Listed[b]; CRHS[c]
076-0297	Conway Robinson Memorial State Forest	Not Eligible
076-0313	Buckland Historic District and Expansion	Listed[b]; CRHS[c]
233-0002	St. Paul's Episcopal Church	Listed[b]

[a] A portion of Thoroughfare Gap Battlefield is listed on the NRHP and VLR. This portion has been assigned a separate site number (030-1016) by the VDHR.
[b] Resource listed on the NRHP and VLR.
[c] Prince William County Registered Historic Site

A summary of the considered resources identified in the vicinity of each route alternative and recommendations concerning Project effects is provided in the following discussion. The information presented here derives from existing records and does not purport to encompass the entire suite of historic and archaeological resources that may ultimately be affected by the undertaking. Once a route is approved by the Virginia State Corporation Commission, the VDHR may request a full archaeological and architectural survey be conducted pursuant to Section II of the VDHR *Guidelines*. Dominion Virginia Power will consult with the VDHR to determine those resources that will be assessed and develop strategies to avoid, minimize, or mitigate direct and indirect impacts on such resources. Additionally, Dominion Virginia Power will consult with the NPS to evaluate impacts on Civil War battlefields.

Proposed Route

The 11 resources under consideration for the Proposed Route include the NRHP-eligible Buckland Mills Battlefield (030-5152), the NRHP-eligible Manassas Station Operations

Battlefield (076-5036), the unevaluated Thoroughfare Gap Battlefield (030-5610), the unevaluated Second Battle of Manassas (076-5190), the NRHP-listed St. Paul's Episcopal Church (233-0002), the NRHP-listed Old Town Hall and Haymarket School (233-0006), the NRHP-listed Manassas National Battlefield Park Historic District (076-0271), the NRHP-eligible Masonic Temple (233-5015), the NRHP-eligible Haymarket Post Office (233-0005), the NRHP-eligible Winterham (233-0008), and the NRHP-eligible Gainesville District School (076-5381). Additionally, the NRHP-eligible Monroe House (076-0147), is located within the 0.5-mile buffer of the Proposed Route; however, the resource is not under consideration in regard to the current Project since the Monroe House was destroyed in 1980 and would not be directly or indirectly impacted by the route. D+A recommends that the Proposed Route may have no impact on St. Paul's Episcopal Church, Masonic Temple, Winterham, and Manassas Station Operations Battlefield. It is recommended that the Proposed Route, depending on final pole placement, may have a moderate impact on the Second Battle of Manassas given the route, as it extends along an undeveloped area, may be visible from within the potential NRHP battlefield boundaries. For the remaining six resources it is recommended that the route may have a minimal visual impact, depending on final pole placement, due to distance from the proposed line, changes in elevation, and/or vegetative cover between the resource and the proposed transmission line corridor. It is recommended that the proposed construction will not have a severe impact on any of the resources associated with the Proposed Route.

In terms of archaeological resources that could be affected by the Proposed Route, there are three previously identified historic archaeological sites (44PW0985, 44PW0986, and 44PW1121) in the right-of-way. Sites 44PW0985 and 44PW0986 have been determined not eligible for listing in the NRHP. Site 44PW1121 has not been formally evaluated for NRHP eligibility.

Carver Road Alternative Route

The 11 resources under consideration for the Carver Road Alternative Route include the NRHP-eligible Buckland Mills Battlefield (030-5152), the NRHP-eligible Manassas Station Operations Battlefield (076-5036), the unevaluated Thoroughfare Gap Battlefield (030-5610), the unevaluated Second Battle of Manassas (076-5190), the NRHP-listed St. Paul's Episcopal Church (233-0002), the NRHP-listed Old Town Hall and Haymarket School (233-0006), the NRHP-listed Manassas National Battlefield Park Historic District (076-0271), the NRHP-eligible Masonic Temple (233-5015), the NRHP-eligible Haymarket Post Office (233-0005), the NRHP-eligible Winterham (233-0008), and the NRHP-eligible Woodlawn (076-0122). Additionally, the NRHP-eligible Monroe House (076-0147), is located within the 0.5-mile buffer of the Carver Road Alternative Route right-of-way; however, the resource is not under consideration in regard to the current Project since the Monroe House was destroyed in 1980 and would not be directly or indirectly impacted by the Carver Road Alternative Route. D+A recommends that the Carver Road Alternative Route may have no impact on the Manassas Station Operations Battlefield, Masonic Temple, Haymarket Post Office, Winterham, and Woodlawn. It is recommended that the Carver Road Alternative Route, depending on final pole placement, may have a moderate impact on the Second Battle of Manassas given the route, as it extends along an undeveloped area, may be visible from within the potential NRHP battlefield boundaries. For the remaining five resources, it is recommended that the Carver Road Alternative Route may have a minimal visual impact, depending on final pole placement, due to distance from the proposed line, changes in elevation, and/or vegetative cover between the resource and the proposed

transmission line corridor. It is recommended that the proposed construction will not have a severe impact on any of the resources associated with the Carver Road Alternative Route.

In terms of archaeological resources that could be affected by the Carver Road Alternative Route, there are three previously identified archaeological sites (44PW1854, 44PW1853, and 44PW1636) in the right-of-way. Site 44PW1636, an historic site, has been determined not eligible for listing in the NRHP. Sites 44PW1854, a multi-component site, and 44PW1853, an historic site, have not been formally evaluated for NRHP eligibility.

Madison Alternative Route

The 9 resources under consideration for the Madison Alternative Route are the NRHP-eligible Buckland Mills Battlefield (030-5152), the NRHP-eligible Manassas Station Operations Battlefield (076-5036), the unevaluated Thoroughfare Gap Battlefield (030-5610), the unevaluated Second Battle of Manassas (076-5190), the NRHP-listed St. Paul's Episcopal Church (233-0002), the NRHP-listed Old Town Hall and Haymarket School (233-0006), the NRHP-listed Buckland Historic District (076-0313), the NRHP-listed Manassas National Battlefield Park Historic District (076-0271), the NRHP-eligible Winterham (233-0008), and the NRHP-eligible Woodlawn (076-0122). Additionally, the NRHP-eligible Monroe House (076-0147), is located within the 0.5-mile buffer of the Madison Alternative right-of-way; however, the resource is not under consideration in regard to the current Project since the Monroe House was destroyed in 1980 and would not be directly or indirectly impacted by the route. D+A recommends that the Madison Alternative Route may have no impact on Manassas Station Operations Battlefield and Winterham. It is recommended that the Madison Alternative Route, depending on final pole placement, may have a moderate impact on the Second Battle of Manassas given the route, as it extends along an undeveloped area, may be visible from within the potential NRHP battlefield boundaries. For the remaining six resources, it is recommended that the route may have a minimal visual impact, depending on final pole placement, due to distance from the proposed line, changes in elevation, and/or vegetative cover between the resource and the proposed transmission line corridor. It is recommended that the proposed construction will not have or severe impact on any of the resources associated with the Madison Alternative Route. Additionally, two unevaluated sites (Site, James Madison Hwy. [076-0463], and Single Dwelling, 15947 Thoroughfare Rd. [076-5669] are located within the Madison Alternative Route right-of-way.

In terms of archaeological resources that could be affected by the Madison Alternative Route, there are two previously identified historic archaeological sites (44PW1498 and 44PW1963) in the right-of-way and one historic site (44PW1852) located within 10 feet of the right-of-way. Sites 44PW1498, 44PW1963 and 44PW1852 have not been formally evaluated for NRHP eligibility.

I-66 Hybrid Alternative Route

The 11 resources under consideration for the I-66 Hybrid Alternative Route are the NRHP-eligible Buckland Mills Battlefield (030-5152), the NRHP-eligible Manassas Station Operations Battlefield (076-5036), the unevaluated Thoroughfare Gap Battlefield (030-5610), the unevaluated Second Battle of Manassas (076-5190), the NRHP-listed St. Paul's Episcopal

Church (233-0002), the NRHP-listed Old Town Hall and Haymarket School (233-0006), the NRHP-listed Manassas National Battlefield Park Historic District (076-0271), the NRHP-eligible Masonic Temple (233-5015), the NRHP-eligible Haymarket Post Office (233-0005), the NRHP-eligible Winterham (233-0008), and the NRHP-eligible Gainesville District School (076-5381). Additionally, the NRHP-eligible Monroe House (076-0147), is located within the 0.5-mile buffer of the I-66 Hybrid Alternative Route right-of-way; however, the resource is not under consideration in regard to the current Project since the Monroe House was destroyed in 1980 and would not be directly or indirectly impacted by the route. D+A recommends that the I-66 Hybrid Alternative Route may have no impact on nine of the resources. It is recommended that the I-66 Hybrid Alternative Route, depending on final pole placement, may have a moderate impact on the Second Battle of Manassas given the route, as it extends along an undeveloped area, may be visible from within the potential NRHP battlefield boundaries. For the remaining resource, Manassas Battlefield Park Historic District, it is recommended that the route may have a minimal visual impact, depending on final pole placement, due to distance from the proposed line, changes in elevation, and/or vegetative cover between the resource and the proposed transmission line corridor. It is recommended that the proposed construction will not have a severe impact on any of the resources associated with the I-66 Hybrid Alternative Route.

In terms of archaeological resources that could be affected by the I-66 Hybrid Alternative Route, there are two previously identified archaeological sites (44PW0986 and 44PW1121) in the right-of-way. Site 44PW0986 has been determined not eligible for listing in the NRHP. Site 44PW1121 has not been formally evaluated for NRHP eligibility.

Railroad Alternative Route

The 12 resources under consideration for the Railroad Alternative Route are the NRHP-eligible Buckland Mills Battlefield (030-5152), the NRHP-eligible Manassas Station Operations (076-5036), the unevaluated Thoroughfare Gap Battlefield (030-5610), the unevaluated Second Battle of Manassas (076-5190), the NRHP-listed St. Paul's Episcopal Church (233-0002), the NRHP-listed Old Town Hall and Haymarket School (233-0006), the NRHP-listed Manassas National Battlefield Park Historic District (076-0271), the NRHP-eligible Masonic Temple (233-5015), the NRHP-eligible Haymarket Post Office (233-0005), the NRHP-eligible Winterham (233-0008), the NRHP-eligible Woodlawn (076-0122), and the NRHP-eligible Gainesville District School (076-5381). Additionally, the NRHP-eligible Monroe House (076-0147), is located within the 0.5-mile buffer of the Railroad Alternative Route right-of-way; however, the resource is not under consideration in regard to the current Project since the Monroe House was destroyed in 1980 and would not be directly or indirectly impacted by the route. D+A recommends that the Railroad Alternative Route may have no impact on Manassas Station Operations Battlefield, Woodlawn, Gainesville District School, Haymarket Post Office, Masonic Temple, and Winterham. It is recommended that the Railroad Alternative Route, depending on final pole placement, may have a moderate impact on the Second Battle of Manassas given the route, as it extends along an undeveloped area, may be visible from within the potential NRHP battlefield boundaries. For the remaining five resources, it is recommended that the route may have a minimal visual impact, depending on final pole placement, due to distance from the proposed line, changes in elevation, and/or vegetative cover between the resource and the proposed transmission line corridor. It is recommended that the proposed construction will not have a severe impact on any of the resources associated with the Railroad Alternative Route.

Additionally, the unevaluated North Fork Steel Truss Bridge (076-0150) is located within the Railroad Alternative Route right-of-way.

In terms of archaeological resources that could be affected by the Railroad Alternative Route, three previously identified archaeological sites (44PW0893, 44PW1853, and 44PW1854) are located in the right-of-way. Site 44PW0893 represents a prehistoric camp, while sites 44PW1853 and 44PW1854 are multi-component sites. None of the sites have been formally evaluated for NRHP eligibility.

I. Chesapeake Bay Preservation Areas

Construction, installation, operation and maintenance of electric transmission lines are conditionally exempt from the Chesapeake Bay Act as stated in the exemption for public utilities, railroads, public roads and facilities in 9 VAC 25-830-150. The Company will meet those conditions.

J. Wildlife Resources

As noted in Section 2.F, the FWS, VDCR and VDGIF databases were searched in order to assess the potential presence of any state-threatened or endangered species in the vicinity of the Project. The search determined there is the potential presence of four federal and state-endangered and threatened species within the Project area. Dominion Virginia Power will perform any necessary surveys to determine if these species are present and to coordinate with the appropriate regulatory agencies in order to avoid and minimize impacts on these resources to the extent practicable.

K. Recreation, Agricultural, and Forest Resources

Proposed Route

Land uses crossed by the Proposed Route are primarily developed (3.4 miles and 68%). Other land uses that would be crossed by the Proposed Route consist of about 1.4 miles (28%) of forested land, 0.2 mile (4%) of cropland, and less than 0.1 mile of open land (<1%). Development of this route would require the clearing of about 31.3 acres of trees. No AFDs designated by Prince William County would be crossed by the Proposed Route.

The Proposed Route would cross the Culpeper Loop of the Virginia Birding and Wildlife Trail in four locations. The first crossing of the Culpeper Loop of the Virginia Birding and Wildlife Trail is at the route's crossing of Lee Highway (U.S. 29). The road would be spanned and no impacts to the trail would occur. The trail crossing is in a location with much commercial and industrial development and would not impact the scenic quality of the trail in this location.

The Proposed Route would also make one crossing along I-66, one on James Madison Highway (U.S. 15), and one on John Marshall Highway (SR 55). All of these crossings would be spanned and take place in areas with large highways/roads and either high density residential development or commercial/business development. This route is not expected to impact the scenic quality of the trail in these locations.

Carver Road Alternative Route

Land uses crossed by the Carver Road Alternative Route are primarily forested (3.8 miles and 57%) and developed lands (2.8 miles and 42%). Other land uses that would be crossed by the Proposed Route consist of about 0.1 mile (1%) of open land and less than 0.1 mile (<1%) of cropland. Development of this route would require the clearing of about 46.2 acres of trees. Prince William County has designated Agricultural and Forestal Districts ("AFDs"). No AFDs would be crossed by the Carver Road Alternative Route.

The Carver Road Alternative would cross the Culpeper Loop of the Virginia Birding and Wildlife Trail at the route's crossing of Lee Highway (U.S. 29) as described above for the Proposed Route. The Carver Road Alternative would also cross the trail at the route's second crossing of I-66 just west of the Lee Highway (U.S. 29) crossing. This crossing would be spanned and take place in areas with large highways/roads and high density residential development and near commercial/business development. This route is not expected to impact the scenic quality of the trail in these locations.

Madison Alternative Route

Lands along the Madison Alternative Route are primarily forested (4.4 miles and 54%) and developed land (3.4 miles and 41%). Other land uses that would be crossed by the Madison Alternative Route include about 0.3 mile (4%) of cropland, and 0.1 mile (1%) of open land. Development of this route would require the clearing of about 61.6 acres of trees. No AFDs designated by Prince William County would be crossed by the Madison Alternative Route.

The Madison Alternative Route would cross the Culpeper Loop of the Virginia Birding and Wildlife Trail at the route's crossing of Lee Highway (U.S. 29) and I-66 as described above for the Carver Road Alternative Route.

I-66 Hybrid Alternative Route

Land uses crossed by the I-66 Hybrid Alternative Route are primarily developed (3.5 miles and 66%). Other land uses that would be crossed by the I-66 Hybrid Alternative Route consist of about 1.6 miles (30%) of forested land, 0.1 mile of open land (2%) and crop land (2%). Development of this route would require the clearing of about 26.4 acres of trees. No AFDs designated by Prince William County would be crossed by the I-66 Hybrid Alternative Route.

The I-66 Hybrid Alternative Route would cross the Culpeper Loop of the Virginia Birding and Wildlife Trail in six locations. The first would be the route's crossing of Lee Highway (U.S. 29) as described above for the Proposed Route. This route would also make three crossings along I-66, one on James Madison Highway (US 15), and one on John Marshall Highway (SR 55). With the exception of the Lee Highway crossing and the first I-66 crossing, the remaining crossings would be constructed underground in areas with large highways/roads and either high density residential development or commercial/business development. This route would not impact the scenic quality of the trail in these locations.

Railroad Alternative Route

Lands along the Railroad Alternative are primarily forested (2.9 miles and 51%) and developed land (2.6 miles and 45%). Other land uses that would be crossed by the Railroad Alternative Route consist of about 0.1 mile of open land (2%) and 0.1 mile of cropland (2%). Development of this route would require the clearing of about 39.0 acres of trees. No AFDs designated by Prince William County would be crossed by the Railroad Alternative Route.

The Railroad Alternative Route would cross the Culpeper Loop of the Virginia Birding and Wildlife Trail at the route's crossing of Lee Highway (U.S. 29) and I-66 as described above for the Carver Road Alternative Route.

Haymarket Substation

Lands associated with the proposed Haymarket Substation are privately owned and purchase of the property will occur prior to construction. There are no recreation areas or conservation lands located on or immediately adjacent to lands that will be utilized for construction and operation of the Haymarket Substation. The substation will be located south of John Marshall Highway (SR 55) and east of Charles Street (SR 1307).

The Company's tree clearing methods utilize the Virginia Department of Forestry's Best Management Practices ("BMPs") for Water Quality. Specific sections of the BMPs that are pertinent to transmission line clearing operations include:

- Stream Crossing Design and Construction (culvert installation and removal);
- Equipment Maintenance and Litter;
- Harvest Closure (rehabilitation of the right-of-way after construction); and
- Revegetation of Disturbed Area.

The Company will utilize the above BMPs on the Project. Further discussion of the right-of-way clearing, rehabilitation, and maintenance can be found in Section 2.3 of the Environmental Routing Study.

L. Use of Pesticides and Herbicides

Dominion Virginia Power typically maintains transmission right-of-way by means of selective, low volume applications of EPA-approved, non-restricted use herbicides. The goal of this method is to exclude tall growing brush species from right-of-way by establishing early successional plant communities of native grasses, forbs, and low growing woody vegetation. "Selective" application means the Company sprays only the undesirable plant species (as opposed to broadcast applications). "Low volume" application means the Company uses only the volume of herbicide necessary to remove the selected plant species. These herbicides are routinely applied by hand. DEQ has made previous requests that only herbicides approved for aquatic use by the EPA or the FWS be used in or around any surface water; Dominion Virginia Power intends to comply with this request.

M. Geology and Mineral Resources

The Proposed and Alternative Routes all fall within the Piedmont geologic province. This province is characterized by its gently rolling topography, deeply weathered bedrock, and a relative scarcity of solid outcrops. The Piedmont Lowlands sub-province, has an elevation range of 60 to 700 feet. The sub-province's physiography is classified by broad moderately dissected valleys separated by broad low hills. The Piedmont Uplands sub-province has an elevation range of 100 to 1,220 feet. The sub-province's physiography is classified by broad gently rolling hills and valleys.

Mineral resource areas were identified through review of publicly-available datasets, USGS topographic quadrangles, and recent (2011) digital aerial photographs. There is one mineral resource located within the Project study area. The Proposed Route, Carver Road Alternative Route, Madison Alternative Route, I-66 Hybrid Alternative Route, and the Railroad Alternative Route, are all routed to avoid the Cedar Mountain Stone and Chemung Contracting facility owned and operated by Dalrymple Companies. The routes are located within 0.25 mile of the facility, however, they are all on the opposite side of I-66 and therefore would not impact any plans for future expansion of the facility. Transportation Infrastructure

N. Transportation Infrastructure

Temporary closures of roads could be required during construction of these various Project segments. No long term impacts to roads are anticipated. The Company will maintain proper clearances between all road surfaces and the conductors and will comply with Virginia Department of Transportation ("VDOT") requirements for access to the right-of-ways from public roads as well as the aerial crossings of the roads. At the appropriate time, the Company will obtain the necessary VDOT permits as required. Correspondence with the VDOT is provided as Attachment 2.N.1.

Proposed Route

There are 20 road crossings along the Proposed Route. Four of these crossings are of county or local roads and 16 are of state or U.S. highways. From the tie-in on the converted Line #124 to the proposed Haymarket Substation these road crossings are I-66 East Exit 44 on-ramp, I-66 East, I-66 West, I-66 West Exit 44 on-ramp (two crossings), I-66 West Exit 44 off-ramp (2 crossings), University Boulevard, I-66 West Exit 43 off-ramp, I-66 West Exit 43 on-ramp, Lee Highway (U.S. 29), I-66 West Exit 43 off-ramp, I-66 West Exit 43 on-ramp, Larapinta Court, Catharpin Road (SR 676), Jefferson Street (SR 625), I-66 West, I-66 East, James Madison Highway (U.S. 15), and John Marshall Highway (SR 55).

Carver Road Alternative Route

There are 25 road crossings along the Proposed Route. Nine of these crossings are of county or local roads and 16 are of state or U.S. highways. From the tie-in on the converted Line #124 to the proposed Haymarket Substation these road crossings are: I-66 East Exit 44 on-ramp, I-66 East, I-66 West, I-66 West Exit 44 on-ramp (two crossings), I-66 West Exit 44 off-ramp (2 crossings), University Boulevard, I-66 West Exit 43 off-ramp, I-66 West Exit 43 on-ramp, Lee Highway (U.S. 29), I-66 West Exit 43 off-ramp, I-66 West Exit 43 on-ramp, I-66 West, I-66

East, Daves Store Lane (three crossings), John Marshall Highway (SR 55), Bellingham Drive, Somerset Crossing Drive (SR 3310), Carver Road (SR 647), Old Carolina Road (SR 703), Haymarket Drive (SR 625), and James Madison Highway (U.S. 15).

Madison Alternative Route

There are 28 road crossings along the Madison Alternative Route. Twelve of these crossings are of county or local roads and 16 are of state or U.S. highways. From the tie-in on the converted Line #124 to the proposed Haymarket Substation these road crossings are: I-66 East Exit 44 on-ramp, I-66 East, I-66 West, I-66 West Exit 44 on-ramp (two crossings), I-66 West Exit 44 off-ramp (2 crossings), University Boulevard, I-66 West Exit 43 off-ramp, I-66 West Exit 43 on-ramp, Lee Highway (U.S. 29), I-66 West Exit 43 off-ramp, I-66 West Exit 43 on-ramp, I-66 West, I-66 East, Daves Store Lane (three crossings), John Marshall Highway (SR 55), Bellingham Drive, Somerset Crossing Drive (SR 3310), Carver Road (SR 647), Old Carolina Road (SR 703), Thoroughfare Road (SR 682), James Madison Highway (U.S. 15), Thoroughfare Road (SR 682), Hokie Place, Market Ridge Boulevard, and James Madison Highway (U.S. 15).

I-66 Hybrid Alternative Route

There are 25 road crossings along the I-66 Hybrid Alternative Route. Five of these crossings are of county or local roads and 20 are of state or U.S. highways. From the tie-in on the converted Line #124 to the proposed Haymarket Substation these road crossings are I-66 East Exit 44 on-ramp, I-66 East, I-66 West, I-66 West Exit 44 on-ramp (two crossings), I-66 West Exit 44 off-ramp (2 crossings), University Boulevard, I-66 West Exit 43 off-ramp, I-66 West Exit 43 on-ramp, Lee Highway (U.S. 29), I-66 West Exit 43 off-ramp, I-66 West Exit 43 on-ramp, I-66 West, I-66 East, Catharpin Road (SR 676), I-66 East, I-66 West, Jordan Lane (SR 1303), Jefferson Street (SR 625), Walter Robinson Lane, I-66 West, I-66 East, James Madison Highway (U.S. 15), and John Marshall Highway (SR 55).

Railroad Alternative Route

There are 22 road crossings along the Railroad Alternative Route. Six of these crossings are of county or local roads and 16 are of U.S. or state highways. From the tie-in on the converted Line #124 to the proposed Haymarket Substation these road crossings are: I-66 East Exit 44 on-ramp, I-66 East, I-66 West, I-66 West Exit 44 on-ramp (two crossings), I-66 West Exit 44 off-ramp (2 crossings), University Boulevard, I-66 West Exit 43 off-ramp, I-66 West Exit 43 on-ramp, Lee Highway (U.S. 29), I-66 West Exit 43 off-ramp, I-66 West Exit 43 on-ramp, I-66 West, I-66 East, Daves Store Lane (three crossings), John Marshall Highway (SR 55), Jefferson Street (SR 625), Kapp Valley Way, and James Madison Highway (U.S. 15).

ATTACHMENTS

Diana Faison (VirginiaPower - 1)

From: Burstein, Daniel (DEQ) [Daniel.Burstein@deq.virginia.gov]
Sent: Wednesday, August 13, 2014 5:27 PM
To: Diana Faison (VirginiaPower - 1)
Cc: Irons, Ellie (DEQ); Fulcher, Valerie (DEQ)
Subject: RE: Dominion Virginia Power proposed Haymarket 230 kV Line and Substation - Scoping Request

DEQ-NRO comments regarding the Scoping Request for the **Dominion Virginia Power proposed Haymarket 230 kV Line and Substation** are as follows:

Land Protection Division - The project manager is reminded that if any solid or hazardous waste is generated/encountered during construction, the facility would follow applicable federal, state, and county regulations for their disposal.

Air Compliance/Permitting - The project manager is reminded that during the construction phases that occur with this project; the project is subject to the Fugitive Dust/Fugitive Emissions Rule 9 VAC 5-50-60 through 9 VAC 5-50-120. In addition, should the project install fuel burning equipment (Boilers, Generators, Compressors, etc...), or any other air pollution emitting equipment, the project may be subject to 9 VAC 5-80, Article 6, Permits for New and Modified sources and as such the project manager should contact the Air Permit Manager DEQ-NRO prior to installation or construction, and operation, of fuel burning or other air pollution emitting equipment for a permitting determination. Lastly, should any open burning or use of special incineration devices be employed in the disposal of land clearing debris during demolition and construction, the operation would be subject to the Open Burning Regulation 9 VAC 5-130-10 through 9 VAC 5-130-60 and 9 VAC 5-130-100.

Virginia Water Protection Permit (VWPP) Program - The project manager is reminded that a VWP permit from DEQ may be required should impacts to surface waters be necessary. DEQ VWP staff recommends that the avoidance and minimization of surface water impacts to the maximum extent practicable as well as coordination with the US Army Corps of Engineers. Upon receipt of a Joint Permit Application for the proposed surface water impacts, DEQ VWP Permit staff will review the proposed project in accordance with the VWP permit program regulations and current VWP permit program guidance.

Water Permitting/VPDES Program/Stormwater: The project manager is reminded to follow all applicable regulations.

Daniel Burstein
Regional Enforcement Specialist, Senior II
Virginia Department of Environmental Quality
Northern Virginia Regional Office
13901 Crown Court
Woodbridge, VA 22193
Phone: (703) 583-3904
Fax: (703) 583-3821
daniel.burstein@deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

Clyde E. Cristman
Director

Joe Elton
Deputy Director of Operations

Rochelle Altholz
Deputy Director of Administration
and Finance

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

600 East Main Street, 24th Floor
Richmond, Virginia 23219
(804)786-6124

April 13, 2015

Michael Buckless
Natural Resource Group
1 Financial Plaza, STE 1515
Providence, RI 02903

Re: Gainesville to Haymarket 230 kV Transmission Line

Dear Mr. Buckless:

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

Gainesville Quad:

Railroad, I-66, I-66 Hybrid, Carver Road and Madison Alternatives:

Biotics documents the presence of natural heritage resources within two miles of the project area. However, due to the scope of the activity and the distance to the resources, we do not anticipate that this project will adversely impact these natural heritage resources.

Northern Alternative:

Biotics documents the presence of natural heritage resources within two miles of the project area. However, due to the scope of the activity and the distance to the resources, we do not anticipate that this project will adversely impact these natural heritage resources. Though, please note that approximately one mile of this section goes through the Conway-Robinson Memorial State Forest managed by the Virginia Department of Forestry (VDOF). This proposed route intersects a documented, old aged (>100 year old) approximately 400 acre hardwood forest that is under study by DCR ecologists to determine the presence of natural heritage resources. DCR recommends coordination with VDOF regarding potential impacts to the state protected forest.

Arcola Quad:

New Road Alternative:

The Bull Run – Chestnut Lick Stream Conservation Unit (SCU) is located within the project area. The Bull Run – Chestnut Lick SCU has been given a biodiversity ranking of B2, which represents a site of very high significance. The natural heritage resources associated with this site are:

Aquatic Natural Community, 3rd Order	G2G3/S2S3/NL/NL
Aquatic Natural Community, 2nd Order	G2/S2/NL/NL

The documented Aquatic Natural Communities are based on Virginia Commonwealth University's INSTAR (*Interactive Stream Assessment Resource*) database which includes over 2,000 aquatic (stream and river) collections statewide for fish and macroinvertebrates. These data represent fish and macroinvertebrate assemblages, instream habitat, and stream health assessments. The associated Aquatic Natural Communities are significant on multiple levels. First, the 3rd Order stream is a grade A+, per the VCU-Center for Environmental Sciences (CES), indicating its relative regional significance, considering its aquatic community composition and the present-day conditions of other streams in the region. This stream reach also holds an "Exceptional" stream designation per the INSTAR Virtual Stream Assessment (VSS) score. This score assesses the similarity of this stream to ideal stream conditions of biology and habitat for this region. Lastly, this stream contributes to high Biological Integrity at the watershed level (6th order) based on number of native/non-native, pollution-tolerant/intolerant and rare, threatened or endangered fish and macroinvertebrate species present. The 2nd Order stream has a grade of B and a designation of "Healthy" per the VSS score.

Threats to the significant Aquatic Natural Community and the surrounding watershed include water quality degradation related to point and non-point pollution, water withdrawal and introduction of non-native species.

Middleburg Quad:

New Road Alternative:

Biotics documents the presence of natural heritage resources within two miles of the project area. However, due to the scope of the activity and the distance to the resources, we do not anticipate that this project will adversely impact these natural heritage resources.

Thoroughfare Gap Quad

Northern, Railroad, I-66, I-66 Hybrid, Carver Road and Madison Alternatives:

Biotics documents the presence of natural heritage resources within two miles of the project area. However, due to the scope of the activity and the distance to the resources, we do not anticipate that this project will adversely impact these natural heritage resources.

New Road Alternative:

According to the information currently in our files, the Silver Lake Conservation Site is downstream from the project site. Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Conservation sites are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. Silver Lake Conservation Site has been given a biodiversity significance ranking of B2, which represents a site of very high significance. The natural heritage resource of concern at this site is:

Piedmont / Northern Coastal Plain Basic Seepage Swamp	G4G5/S2?/NL/NL

The Piedmont / Northern Coastal Plain Basic Seepage Swamp association is dominated by red maple and ranges from southern New England south to the Piedmont of Virginia. It often occurs in edge-zones or abandoned oxbows of floodplains, where groundwater is discharged from the base of an adjoining slope. (Fleming, 2013) In general, these swamps are moderately acidic to moderately basic and have some seepage indicators but are not particularly species-rich. Soils are shallow to moderately deep mucks over mineral soils. (Natureserve, 2015) The most characteristic species of this community type appear to be red maple (*Acer rubrum*), green ash (*Fraxinus pennsylvanica*), white ash (*Fraxinus americana*), tulip-tree (*Liriodendron tulipifera*), spicebush (*Lindera benzoin var. benzoin*), skunk cabbage (*Symplocarpus foetidus*), cinnamon fern (*Osmundastrum cinnamomeum var. cinnamomeum*), orange jewelweed (*Impatiens capensis*), and clearweed (*Pilea pumila*) (Fleming, 2013).

In addition, the Catharpin Creek Above Rt 676 Stream Conservation Unit (SCU) is located downstream from the project site. The Catharpin Creek Above Rt 676 SCU has been given a biodiversity ranking of B2, which represents a site of very high significance. The natural heritage resource associated with this site is:

Aquatic Natural Community	G2G3/S2S3/NL/NL

The associated Aquatic Natural Communities are significant on multiple levels. First, this stream is a grade B, per the VCU-Center for Environmental Sciences (CES), indicating its relative regional significance, considering its aquatic community composition and the present-day conditions of other streams in the region. This stream reach also holds a "Healthy" stream designation per the INSTAR Virtual Stream Assessment (VSS) score.

New Road and Wheeler Alternatives:

The Broad Run Stream Conservation Unit (SCU) is located downstream from these project sites. The Broad Run SCU has been given a biodiversity significance ranking of B3, which represents a site of high significance. The natural heritage resources of concern associated with this SCU are:

Alasmidonta varicosa	Brook floater	G3/S1/NL/LE
Elliptio lanceolata	Yellow lance	G2G3/S2S3/SOC/NL

The Brook floater, a small freshwater mussel species, is known from the northeastern United States primarily in the Atlantic Slope drainages (NatureServe, 2009). In Virginia, it is recorded from the Potomac River basin with a possible record from the James River. Of 14 documented records in Virginia, only two are thought to be viable. Population declines have been documented throughout its range (NatureServe, 2009). The Brook floater typically inhabits flowing-water habitats in and near riffles and rapids of smaller creeks with rocky or gravelly substrates (Nedeau et al., 2000 per NatureServe, 2009). Many facets of its life history are unknown including its fish host. Threats for the Brook floater in particular include poor water quality as this species does not tolerate silt or nutrient pollution well (Stevenson and Bruenderman, 1995). Please note that this species is currently listed as endangered by the Virginia Department of Game and Inland Fisheries (VDGIF).

The Yellow lance occurs in mid-sized rivers and second and third order streams. To survive, it needs a silt-free, stable streambed and well-oxygenated water that is free of pollutants. This species has been the subject of taxonomic debate in recent years (NatureServe, 2009). Currently in Virginia, the Yellow lance is recognized from populations in the Chowan, James, York, and Rappahannock drainages. Its range also extends into Neuse-Tar river system in North Carolina. In recent years, significant population declines have been noted across its range (NatureServe, 2009). The Yellow lance may be particularly sensitive to chemical pollutants and exposure to fine sediments from erosion (NatureServe, 2009). Please note that this species is currently classified as a species of concern by the United States Fish and Wildlife Service (USFWS); however, this designation has no official legal status.

Considered good indicators of the health of aquatic ecosystems, freshwater mussels are dependent on good water quality, good physical habitat conditions, and an environment that will support populations of host fish species

(Williams et al., 1993). Because mussels are sedentary organisms, they are sensitive to water quality degradation related to increased sedimentation and pollution. They are also sensitive to habitat destruction through dam construction, channelization, and dredging, and the invasion of exotic mollusk species.

In addition, Broad Run has been designated by the VDGIF as a "Threatened and Endangered Species Water" for the Brook floater.

To minimize adverse impacts to the aquatic ecosystems as a result of the proposed activities, DCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/storm water management laws and regulations, establishment/enhancement of riparian buffers with native plant species and maintaining natural stream flow. Due to the legal status of the Brook floater, DCR also recommends coordination with Virginia's regulatory authority for the management and protection of this species, the VDGIF, to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 – 570).

Furthermore, Mottled duskywing has been historically documented in the project vicinity. The Mottled Duskywing (*Erynnis martialis* , G3/S1S3/NL/NL) is known for its 'showy' appearance and is a popular photography subject. It is a fairly small species with a bold pattern on its brown wings. The first brood is darker in coloration than the second brood with both sexes having similar appearance. The forewing has black patches and white markings that give it a mottled appearance. There is a small silvery patch along the leading edge of the front wing. The hind wing is mottled as well, but to a lesser extent. Fresh specimens have a violet sheen to the wings. The Mottled Duskywing favors open woods, barrens, sand hills, and brushy fields. Its host plant of choice resides in the Rhamnaceae (Buckthorn) family. In Virginia, this would most likely be New Jersey Tea (*Ceanothus americanus*). There is speculation that early control of Gypsy moths involving spraying may have damaged populations in five East coast states. Since they occupy niche habitats, it is important they are maintained.

Due to the potential for this site to support populations of natural heritage resources, DCR recommends an inventory for Mottled duskywing wherever New Jersey Tea is present in the project rights-of-way for the New Road and Wheeler Alternatives. With the survey results we can more accurately evaluate potential impacts to natural heritage resources and offer specific protection recommendations for minimizing impacts to the documented resources.

The Railroad, I-66, I-66 Hybrid, Carver Road and Madison alternatives bisect an Ecological Landscape Corridor that could diminish the value of the corridor by fragmentation. The Northern Alternative route also bisects an Ecological Landscape Corridor. However, as the bisection appears to occur within an existing Right-of-way for Route 66. DCR does not anticipate that the proposed project route in this location would adversely impact the landscape corridor. Finally the Wheeler Alternative intersects an Ecological Landscape Corridor approximately midway through the proposed corridor and at the southern terminus adjacent to Lake Manassas, and the New Road Alternative bisects a Landscape Corridor as it crosses Little Bull Run, promoting fragmentation of these areas. DCR recommends using existing rights-of-way to avoid fragmenting intact deciduous forests

Fragmentation occurs when a large, contiguous ecosystem is transformed into one or more smaller patches surrounded by disturbed areas resulting from the conversion and development of the most accessible and/or more productive sites to cultivated land, residential development, or other non-forest land use, leaving the remaining forest in stands of varying size and degrees of isolation. The alteration of the existing land use that leads to habitat simplification and fragmentation, disrupt species interactions and ecosystem processes. Fragmentation alters solar radiation, nutrient, wind and water regimes for the isolated sites, with concomitant effects on species and natural communities. Habitat fragmentation also results in biogeographic changes that disrupt species interactions and ecosystem processes, reducing biodiversity and habitat quality due to limited recolonization, increased predation and egg parasitism, and increased invasion by weedy species. Minimizing forest fragmentation is a key mitigation for any landscape alteration, in order to preserve the natural patterns and connectivity of habitats that are key components of biodiversity.

Please note that open maintained areas within the project rights-of-way with diabase derived soils may have the potential to support rare plants. DCR recommends the development and implementation of a maintenance plan

that specifies the use of mechanical means for maintenance and avoids the use of herbicides within the ROW to avoid impacts to natural heritage resources.

Many invasive plant species are adapted to take advantage of soil disturbances and poor soil conditions. These adaptations are part of what enable certain species to be invasive. Non-native invasive plants are found through Virginia. Therefore, the potential exists for some VDOT projects to further the establishment of invasive species. To minimize the potential for invasive species infestation, projects should be conducted to minimize the area of disturbance, and disturbed sites should be revegetated with desirable species at the earliest opportunity following disturbance. Equally as important, species used for revegetation should not include the highly invasive species that have traditionally been used for revegetating disturbed sites. We recommend VDOT avoid using crown vetch, tall fescue, weeping lovegrass, and autumn olive if at all possible.

For more information on invasive alien plants and native plants, see the DCR-Division of Natural Heritage website http://www.dcr.virginia.gov/natural_heritage/invspinfo.shtml. For sources of native plant material, see the Virginia Native Plant Society's website (http://vnps.org/) or the U.S. Fish and Wildlife Service nursery list for Virginia (http://www.fws.gov/ChesapeakeBay/BayScapes/bsresources/bs-nurseries.html).

The Bull Run Mountains Natural Area Preserve has been documented within two miles of these project boundaries. However, due to the scope of the activity proposed, DCR does not anticipate any negative impacts to the natural area preserve and associated natural heritage resources.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

New and updated information is continually added to Biotics. Please re-submit a completed order form and project map for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.

A fee of $920.00 has been assessed for the service of providing this information. Please find enclosed an invoice for that amount. Please return one copy of the invoice along with your remittance made payable to the Treasurer of Virginia, **DCR - Division of Natural Heritage, 600 East Main Street, 24th Floor, Richmond, VA 23219.** Payment is due within thirty days of the invoice date. Please note the change of address for remittance of payment as of July 1, 2013. Late payment may result in the suspension of project review service for future projects.

The Virginia Department of Game and Inland Fisheries (VDGIF) maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from http://vafwis.org/fwis/ or contact Gladys Cason (804-367-0909 or Gladys.Cason@dgif.virginia.gov).

Should you have any questions or concerns, feel free to contact me at (804) 692-0984. Thank you for the opportunity to comment on this project.

Sincerely,

Alli Baird

Alli Baird, LA, ASLA
Coastal Zone Locality Liaison

Cc: Amy Ewing, VDGIF

Troy Andersen, USFWS

Literature Cited

Fleming, G.P., K.D. Patterson, K. Taverna, and P.P. Coulling. 2013. The natural communities of Virginia: classification of ecological community groups. Second approximation. Version 2.6. Virginia Department of Conservation and Recreation, Division of Natural Heritage, Richmond, VA.

NatureServe. 2009. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available http://www.natureserve.org/explorer. (Accessed: March 16, 2010 and April 5, 2010).

NatureServe. 2015. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available http://www.natureserve.org/explorer. (Accessed: April 9, 2015).

Nedeau, E.J., M.A. McCollough, and B.I. Swartz. 2000. The freshwater mussels of Maine. Maine Department of Inland Fisheries and Wildlife, Augusta, Maine. 118 pp.

Stevenson, Phillip H. and Sue A. Bruenderman 1995. A Guide to Endangered and Threatened Species of Virginia. K. Terwilliger ed. The McDonald and Woodward Publishing Company, Blacksburg, Virginia. p. 74.

Tewksbury, Joshua J., Douglas J. Levey, Nick M. Haddad, Sarah Sargent, John L. Orrock, Aimee Weldon, Brent J. Danielson, Jory Brinkerhoff, Ellen I. Damschen, and Patricia Townsend. 2002. Corridors affect plants, animals, and their interactions in fragmented landscapes. Proceedings of the National Academy of Sciences 99:12923-12926.

Virginia Department of Conservation and Recreation - Division of Natural Heritage and Virginia Department of Game and Inland Fisheries. 2013. Atlas of Rare Butterflies, Skippers, Moths, Dragonflies, and Damselflies of Virginia. Accessed at **www.vararespecies.org** on April 8, 2015.

Williams, J.D., M.L. Warren, Jr., K.S. Cummings, J.L. Harris, and R.J. Neves. 1993. Conservation status of freshwater mussels of the United States and Canada. Fisheries 18: 6-9.

COMMONWEALTH OF VIRGINIA
Department of Conservation and Recreation

DCR – Natural Heritage
600 East Main Street, 24th Floor
Richmond, VA 23219

Make checks payable to: ***TREASURER OF VIRGINIA***
Send payment to the address at the left
Payment is due 30 days after receipt of invoice

Fed I.D. # 54-600449
DUNS # 8097 44444

Accounts Payable

INVOICE

Invoice Number: **H-11316**

Invoice Date: April 13, 2015

Michael Buckless
Natural Resource Group
1 Financial Plaza, STE 1515
Providence, RI 02903

Please return remittance copy with payment to ensure proper credit to your invoice.

Taxpayer I.D.# 20-8860146

Contact: Liz Dean
Division of Natural Heritage
(804) 371-2671 FAX# (804) 371-2674 TDD (804) 786-2121

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
Impact Review by Quad	4	AT	$90.00	$360.00
Element Occurrences	6+	EA	$60.00	$60.00
Site Reference Gainesville to Haymarket 230 kV Transmission Line				
Priority	1	AT	$500.00	$500.00

Credit Information:
199 0200 15 50317 02199 73201 304

Amount Due: **$920.00**

The Department of Conservation and Recreation may charge interest on all past due accounts receivable in accordance with guidelines promulgated by the Department of Accounts and at the underpayment rate prescribed in Section 58.1-15 of the Code of Virginia. Each past due account receivable may also be charged an additional amount which shall approximate the administrative cost incurred in collecting the past due amount. The Department may also assess late payment penalty fees as appropriate.

Michael Buckless

From: Smith, Kimberly <kimberly_smith@fws.gov>
Sent: Friday, June 26, 2015 1:21 PM
To: Michael Buckless
Subject: Re: Haymarket Transmission Line Project (Gainesville)

Michael,

We have reviewed the project packages received on May 5, 2015 for the 6 alternatives for the referenced project. We have reviewed the following alternatives: Carver Road, I-66 Hybrid, I-66 Overhead, Madison, Railroad, and Wheeler. The following comments are provided under provisions of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended, and Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c, 54 Stat. 250), as amended.

We have reviewed the determinations provided in the Species Conclusion Tables dated October 27, 2014 and concur with the determinations. Based on the project descriptions and locations, the project area may support potential habitat for the federally listed dwarf wedgemussel (*Alasmidonta heterodon*), harperella (*Ptilimnium nodosum*), and Northern long-eared bat (*Myotis septentrionalis*). We recommend that a detailed habitat assessment be conducted for these species by an approved surveyor in the action area to identify suitable habitat, and that a survey for the species be conducted within all suitable habitat identified in the action area. Surveys are not needed if the approved surveyor determines that no suitable habitat is present. For the bat surveys, follow the most recent survey guidelines at: http://www.fws.gov/northeast/virginiafield/pdf/endspecies/2015IndianaBatSummerSurveyGuidelines01April2015.pdf. A table of optimal survey times for plants can be found on our website at:

http://www.fws.gov/northeast/virginiafield/pdf/endspecies/MISC/20120125_VIRGINIA survey time frame for plants.pdf.

A list of qualified surveyors can be found on our website at: http://www.fws.gov/northeast/virginiafield/endspecies/surveyors.html. This list does not include all individuals qualified or authorized to survey for this species. If you select someone not on the pre-approved surveyor list, provide the proposed surveyor's qualifications and proposed survey design to this office for review and approval prior to initiating the survey. Send copies of all survey results to this office or inform this office if a survey will not be conducted.

After receiving the survey results and implementing any measures to avoid and minimize potential effects to listed species or their habitat that are identified during surveys, update your conclusions and determinations on your species conclusion table with the information received from the habitat assessment and/or survey, and submit the revised project review package, including the survey report. Should project plans change or if

additional information on the distribution of listed species or critical habitat becomes available, this determination may be reconsidered. If you have any questions, please contact me.

On Fri, Jun 26, 2015 at 10:33 AM, Michael Buckless <michael.buckless@nrg-llc.com> wrote:

Ms. Smith,

Just following up on the project routes submitted at the beginning of last month. Do you have an estimated time for receiving these comments?

Thanks, feel free to call with any questions or concerns

Michael Buckless
Michael.buckless@nrg-llc.com
(401) 278-4303 Direct
(401) 447-5391 Cell
(401) 278-4310 Fax

From: Michael Buckless
Sent: Tuesday, May 05, 2015 4:26 PM
To: 'Smith, Kimberly'
Subject: RE: Haymarket Transmission Line Project (Gainesville)

I've resubmitted 6 of the routes (two have fallen off in recent days and are no longer considered viable for construction). You were cc'd on all the project reviews that I sent in to VirginiaFieldOffice@fws.gov. Let me know if you have any additional questions.

Thanks

Michael Buckless
Michael.buckless@nrg-llc.com
(401) 278-4303 Direct
(401) 447-5391 Cell
(401) 278-4310 Fax

From: Smith, Kimberly [mailto:kimberly_smith@fws.gov]
Sent: Monday, May 04, 2015 10:18 AM

To: Michael Buckless
Subject: Re: Haymarket Transmission Line Project (Gainesville)

Hi Michael,

I recommend that you submit each alternative as a separate project in our online project review system and include the alternative number or name (i.e. Haymarket - Alt. 1, Haymarket - Alt. 2). This will be helpful when evaluating alternatives. Once I receive this I can provide more specific comments on each alternative. Because your project will involve tree removal, effects to the federally listed threatened Northern long-eared bat (*Myotis septentrionalis*) will need to be addressed. Surveys may be necessary for this species depending on which alternative is selected based on the amount of suitable habitat that will be removed and the surrounding land use. Let me know if you have any questions.

Kim

Kim

On Thu, Apr 16, 2015 at 9:51 AM, Michael Buckless <michael.buckless@nrg-llc.com> wrote:

Figure just came in, please let me know if you need anything else.

Thanks!

Michael Buckless
Michael.buckless@nrg-llc.com
(401) 278-4303 Direct
(401) 447-5391 Cell
(401) 278-4310 Fax

From: Michael Buckless
Sent: Wednesday, April 15, 2015 4:57 PM

To: 'Smith, Kimberly'
Subject: RE: Haymarket Transmission Line Project (Gainesville)

Kim,

Our GIS guy for this project has left the office for the day, however, I tried repackaging the shapefiles and tested opening this zip file in ArcMap and ArcExplorer. These should work, but if they do not, the requested figure should be available to you tomorrow.

Appologies,

Michael Buckless
Michael.buckless@nrg-llc.com
(401) 278-4303 Direct
(401) 447-5391 Cell
(401) 278-4310 Fax

From: Smith, Kimberly [mailto:kimberly_smith@fws.gov]
Sent: Wednesday, April 15, 2015 4:21 PM

To: Michael Buckless
Subject: Re: Haymarket Transmission Line Project (Gainesville)

Hi Michael,

For some reason I keep getting an error message and can't use the shapefiles. Can you just send the figure?

Thanks,

Kim

On Tue, Apr 14, 2015 at 9:01 AM, Michael Buckless <michael.buckless@nrg-llc.com> wrote:

Thank you Ms. Smith. Please let me know if you need any additional information.

Michael Buckless
Michael.buckless@nrg-llc.com
(401) 278-4303 Direct
(401) 447-5391 Cell
(401) 278-4310 Fax

From: Smith, Kimberly [mailto:kimberly_smith@fws.gov]
Sent: Tuesday, April 14, 2015 8:59 AM

To: Michael Buckless
Subject: Re: Haymarket Transmission Line Project (Gainesville)

Shapefiles would be great but a figure will also work.

On Tue, Apr 14, 2015 at 8:54 AM, Michael Buckless <michael.buckless@nrg-llc.com> wrote:

Yes, would you prefer shapefiles or a figure depicting the routes?

Michael Buckless
Michael.buckless@nrg-llc.com
(401) 278-4303 Direct
(401) 447-5391 Cell
(401) 278-4310 Fax

From: Smith, Kimberly [mailto:kimberly_smith@fws.gov]
Sent: Tuesday, April 14, 2015 7:48 AM
To: Michael Buckless
Subject: Re: Haymarket Transmission Line Project (Gainesville)

Hi Michael,

Do you have a graphic that shows all 8 alternatives? Thanks, Kim

Kim

On Fri, Apr 3, 2015 at 1:18 PM, Michael Buckless <michael.buckless@nrg-llc.com> wrote:

Ms. Smith,

I apologize for the length of time that has passed, however, we have been busy conducting field routing and desktop assessments to come up with the following eight routes that are being considered equally for the Gainesville to Haymarket 230kV Transmission Line Project routing study. In addition, we have calculated forest cover and proposed acres of tree clearing for each of the eight routes and is summarized in the table below.

Gainesville to Haymarket 230kV Transmission Line Project	
Route	**Clearing Required (acres)**
Carver Road Alternative	43.2
I-66 Hybrid Alternative	26.2
I-66 Overhead Alternative	37.5
Madison Alternative	58.6
New Road Alternative	146.4
Northern Alternative	60.0
Railroad Alternative	43.4
Wheeler Alternative	72.9

Please contact me if you have any questions or concerns.

Regards,

Michael Buckless
Michael.buckless@nrg-llc.com
(401) 278-4303 Direct
(401) 447-5391 Cell
(401) 278-4310 Fax

From: Smith, Kimberly [mailto:kimberly_smith@fws.gov]
Sent: Wednesday, December 10, 2014 10:35 AM
To: Michael Buckless
Cc: Troy Andersen
Subject: Haymarket Transmission Line Project (Gainesville)

We have reviewed the revised project package received November 5, 2014 for the referenced project. The following comments are provided under provisions of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended, and Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c, 54 Stat. 250), as amended.

We concur with the determinations provided in the Species Conclusion Table dated October 27, 2014. Based on the project description and location, the project area may support potential habitat for the federally listed dwarf wedgemussel and harperella. If streams will be impacted by the project, we recommend that a detailed habitat assessment be conducted for these species by an approved surveyor in the action area to identify suitable habitat, and that a survey for the species be conducted within all suitable habitat identified in the action area. Surveys are not needed if the approved surveyor determines that no suitable habitat is present. A table of optimal survey times for plants can be found on our website at:

http://www.fws.gov/northeast/virginiafield/pdf/endspecies/MISC/20120125_VIRGINIA survey time frame for plants.pdf. A list of qualified surveyors can be found on our website at http://www.fws.gov/northeast/virginiafield/endspecies/surveyors.html. This list does not include all individuals qualified or authorized to survey for this species. If you select someone not on the pre-approved surveyor list, provide the proposed surveyor's qualifications and proposed survey design to this office for review and approval prior to initiating the survey. Send copies of all survey results to this office or inform this office if a survey will not be conducted.

For the northern long-eared bat, please provide the acreage of trees that will be removed within the action area.

Send copies of all habitat assessments and/or survey results to this office. If the habitat assessment and/or survey determines that suitable habitat or listed species are present, this office will work with you to ensure that the project avoids or minimized adverse impact to listed species and their habitats.

Should project plans change or if additional information on the distribution of listed species or critical habitat becomes available, this determination may be reconsidered. If you have any questions, please contact me.

--

Kimberly Smith

Fish and Wildlife Biologist

U.S. Fish & Wildlife Service

6669 Short Lane

Gloucester, VA 23061

Kimberly_Smith@fws.gov

804-824-2410

http://www.fws.gov/northeast/virginiafield/

--

Kimberly Smith

Fish and Wildlife Biologist

U.S. Fish & Wildlife Service

6669 Short Lane

Gloucester, VA 23061

Kimberly_Smith@fws.gov

804-824-2410

http://www.fws.gov/northeast/virginiafield/

--

Kimberly Smith

Fish and Wildlife Biologist

U.S. Fish & Wildlife Service

6669 Short Lane

Gloucester, VA 23061

Kimberly_Smith@fws.gov

804-824-2410

http://www.fws.gov/northeast/virginiafield/

--

Kimberly Smith

Fish and Wildlife Biologist

U.S. Fish & Wildlife Service

6669 Short Lane

Gloucester, VA 23061

Kimberly_Smith@fws.gov

804-824-2410

http://www.fws.gov/northeast/virginiafield/

--

Kimberly Smith

Fish and Wildlife Biologist

U.S. Fish & Wildlife Service

6669 Short Lane

Gloucester, VA 23061

Kimberly_Smith@fws.gov

804-824-2410

http://www.fws.gov/northeast/virginiafield/

--

Kimberly Smith
Fish and Wildlife Biologist
U.S. Fish & Wildlife Service
6669 Short Lane
Gloucester, VA 23061
Kimberly_Smith@fws.gov
804-824-2410
http://www.fws.gov/northeast/virginiafield/

Dominion Virginia Power
701 East Cary Street, Richmond, VA 23219
Mailing Address: P.O. Box 26666
Richmond, VA 23261
dom.com

July 11, 2014

Ms. Kathleen S. Kilpatrick, Director
Virginia Dept. of Historic Resources
2801 Kensington Avenue
Richmond, VA 23221

RE: Dominion Virginia Power proposed Haymarket 230 kV Line and Substation

Dear Ms. Kilpatrick:

Rapid growth in electrical demand in the Gainesville/Haymarket Virginia areas, coupled with new economic development, particularly in the commercial/high-tech sector, is out growing the electric infrastructure currently in place. This necessitates the need to build new electric transmission infrastructure in western Prince William County and southern portions of the Town of Haymarket.

The new infrastructure will address forecasted increases in energy demand that exceed the capabilities of our current distribution system beginning in 2017. The proposed Haymarket 230 kV Line and Substation project will provide needed capacity to serve the commercial growth in the area, help maintain electrical grid stability, strengthen overall reliability for the community, and enable continued economic development in this area.

Dominion anticipates filing an application with the Virginia State Corporation Commission for the construction of new 230 kilovolt (kV) double-circuit transmission line in the Gainesville and Haymarket areas of Prince William County. The proposed route is approximately six miles long, extending from an existing transmission line, Gainesville to Loudoun (Line 124) located near Route 66 and Prince William Parkway and connects to a new substation west of Rt. 15. The route will require new rights-of-way, approximately 100' – 120' in width in areas where the proposed line does not utilize existing railroad and transportation infrastructure.

As a part of our environmental analysis, Dominion is asking various state and federal agencies to comment on the proposed project prior to Dominion filing the application with the SCC. To facilitate your review, enclosed please find two versions of maps of the area. Our initial route analysis focused within the study area but several constraints have led us to a preliminary route as shown.

Dominion respectfully requests your review and comments on this transmission line project by August 15, 2014. I can arrange to send shape files if this would assist in your review. Should you have questions about the project, please call me at (804) 771-6082 or contact me by email at Diana.Faison@dom.com

Sincerely,

Diana T. Faison
Sr. Site and Permit Specialist

Enclosure
Cc: Jeff Thommes - NRG

COMMONWEALTH of VIRGINIA

Molly Joseph Ward
Secretary of Natural Resources

Department of Historic Resources
2801 Kensington Avenue, Richmond, Virginia 22221

Julie V. Langan
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
www.dhr.virginia.gov

August 7, 2014

Ms. Diana T. Faison
Dominion Virginia Power
P.O. Box 26666
Richmond, VA 23219

Re: Gainesville - Haymarket 230 kV Line and Substation
Prince William County, VA
DHR File No. 2014-0713

Dear Ms. Faison:

Thank you for initiating consultation with DHR on the project referenced above. Our comments are requested as part of the preparation of an application by Dominion Virginia Power to the State Corporation Commission. We reserve the right to provide additional comment through the DEQ-coordinated review of the completed SCC application or within the Federal Section 106 process, if applicable.

As you are certainly aware, the general project area contains numerous historic resources listed in or determined eligible for the Virginia Landmarks Register (VLR) and National Register of Historic Places (NRHP), including several Civil War battlefields. While the impacts to specific resources have not been assessed, it is our opinion that this project has the potential to both directly and indirectly affect significant historic resources. When possible, we recommend utilizing existing transmission rights-of-way; however, when new right-of-way is necessary, consideration of line burial is recommended.

To aid in your assessment of potential impacts to historic resources and prior to finalizing Dominion's application to the SCC, we recommend that a pre-application analysis be prepared and submitted to DHR for review in accordance with Section I of the DHR's *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia*. Once an alternative is approved by the SCC, we are likely to recommend full architectural and archaeological survey pursuant to Section II of the referenced guidance, assessment of the potential direct and indirect impacts to all VLR/NRHP-eligible resources, and avoidance, minimization, or mitigation of all moderate to severe impacts to VLR/NRHP-eligible resources. We look forward to working with Dominion throughout this project. If you have any questions, please contact me at roger.kirchen@dhr.virginia.gov.

Sincerely,

Roger W. Kirchen, Director
Division of Review and Compliance

Administrative Services
10 Courthouse Ave.
Petersburg, VA 23803
Tel: (804) 862-6416
Fax: (804) 862-6196

Capital Region Office
2801 Kensington Ave.
Richmond, VA 23221
Tel: (804) 367-2323
Fax: (804) 367-2391

Tidewater Region Office
14415 Old Courthouse Way
2nd Floor
Newport News, VA 23608
Tel: (757) 886-2807
Fax: (757) 886-2808

Western Region Office
962 Kime Lane
Salem, VA 24153
Tel: (540) 387-5428
Fax: (540) 387-5446

Northern Region Office
5357 Main Street
P.O. Box 519
Stephens City, VA 22655
Tel: (540) 868-7029
Fax: (540) 868-7033

COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION
4975 Alliance Drive
Fairfax, VA 22030

CHARLES A. KILPATRICK, P.E.
COMMISSIONER

July 10, 2015

Ms. Diana T. Faison
Senior Site and Permit Specialist
Virginia Dominion Power
Post Office Box 26666
Richmond, VA 23219

Dear Ms. Faison:

Thank you for the recent correspondence regarding the proposed overhead and hybrid power line alignments along the I-66 corridor between the Gainesville and Haymarket area.

As you are aware, there are three major projects underway along this corridor: (i) the widening I-66 project which is under construction; (ii) interchange improvement project at Route 15 which is also under construction, and (iii) the Transformation 66 which is the development phase.

We appreciate your partnership and have shared your conceptual sketches with our project teams who have found them to be feasible at this time. This assessment is based on current plans for the projects under construction, and the preliminary design for the project in development. Should one of these alternatives be selected, detailed plans will be required for review and coordination with the roadway improvement projects underway.

As this is only a conceptual alignment, please understand that the Department's permit protocol will need to be followed in order to gain approval for placement of utilities within the limited access right of way of the I-66 corridor. Once an alignment selection is determined, VDOT would then like to meet with you and your staff to further discuss details and requirements moving forward.

We look forward to working with you. If there is any assistance we can provide you in the interim, please feel free to contact Richard Burke, Transportation and Land Use Director for Prince William County at (703) 259-2966 or Richard.burke@vdot.virginia.gov.

Sincerely,

Helen Cuervo

Helen Cuervo, P.E.
District Administrator

Copy: Richard Burke
Art Klos

Dominion Virginia Power
701 East Cary Street, Richmond, VA 23219
Mailing Address: P.O. Box 26666
Richmond, VA 23261
dom.com

Direct Dial: (804) 771-6082
Fax: (804) 771-6303
Diana.Faison@dom.com

February 25, 2015

Mr. Art Klos
Virginia Department of Transportation
10228 Residency Road
Manassas, VA 20110

RE: Transmission Line Along I-66 In Haymarket Virginia

Dear Mr. Klos:

Please accept this letter and the three attachments as Dominion Virginia Power's official request to VDOT for review, comments and preliminary approval for both the Hybrid and Overhead transmission line routes along I-66.

Attachment 1: Pages 1 through 8 of the 16 page visual will be utilized for both the Overhead and Hybrid route options beginning at Cushing Road and continuing to Rt. 29. Page 8 shows an area for the transition station required for the conversion from overhead to underground. Pages 9 through 16 show the underground route.

Attachment 2: Pages 1 through 9 are the second half of the Overhead route.

Attachment 3: Manhole details for double circuit underground cables

Although Dominion is still analyzing the various route options, we anticipate filing our application with the State Corporation Commission for project approval in the second quarter of 2015. In order to include these routes in our application, the SCC will require us to have written acknowledgement from VDOT that the proposed alignment or an adjusted alignment would be considered and allowed within your right of way; pending final structure location approval from VDOT.

We greatly appreciated the opportunities to meet with VDOT, as well as some of your contractor representatives to gain additional information related to the proposed projects along I-66 in the Gainesville/Haymarket area. Mr. Fleming and I have tried several times to set up a meeting to go over details of the I-66 widening and other VDOT projects, as well as Dominion's proposed alignments within this corridor in order to produce a better product for all involved.

Page Two

Since we have been unsuccessful in securing a meeting date and time constraints are gaining speed, I am asking for your assistance in routing this project through the proper channels at VDOT to obtain preliminary approval.

If you would like the documents in a digital format, please advise and we can set up an FTP site for document retrieval.

Please contact me at your earliest convenience and let me know if additional information is required to proceed. I may be reached as listed above.

Thank you,

Diana T. Faison
Sr. Site and Permit Specialist

Enclosure
Cc: Tom Fleming, ATCS, P.L.C. (with enclosure)